

ARCHITECTURE

❖ VOLUME LXVII

MAY 1933

NUMBER 5 ❖

The Way Out

By Marshal L. Oliver

THE most urgent problem of the present crisis is to provide the means of immediate unemployment relief. Since local and even State authorities are no longer able to cope with the emergency, this has finally become one of the major responsibilities of the Federal Government. All that remains to be decided is whether the authorities will seek to bring about a recovery of business by undertaking a courageously conceived programme of public works or whether, at last, we must resort to the dole.

The fact has been repeatedly brought out that the underlying cause of economic depression is a failure of buying power. Whereas in the past it was generally believed that a surplus of labor could be absorbed only by the gradual, automatic resumption of industrial activity, recent events have forced the conclusion that the shoe is on the other foot. Economists now unite in proclaiming that until buying power has been restored by creating employment for labor there can be no general recovery of trade.

No industry in the country provides a wider or more highly diversified market than does building. At the same time there is no more constant, unsatisfied demand than that for public and semi-public improvements: slum clearance, model housing, better facilities for education, recreation, and the public health.

If, as is undeniable, these needs can now be satisfied with the maximum of economy and in

A satisfactory solution of the problem of providing employment through a well-conceived plan for work relief must be grounded not only on technical knowledge but also on an understanding of the basic social and economic principles which it implies.

ARCHITECTURE therefore proposes, in a series of forthcoming articles, to present a complete discussion of the question from its logical beginnings. It is sincerely hoped that the readers of these articles will thus be equipped and persuaded to carry on a vigorous and victorious campaign to obtain for this country the relief of which she so desperately stands in need.—EDITOR.

"The idea that a public-works programme represents a desperate risk to cure a moderate evil is the reverse of truth. It is a negligible risk to cure a monstrous anomaly."

—John Maynard Keynes, London, 1921.

such a way as to provide work for a vast number of men who must otherwise be degraded by charity, it is unthinkable that we should hesitate longer before initiating immediate, intelligent action to bring about an extensive programme of Government-financed public works.

Responsibility for the development of such a programme must rest ultimately with our architects and engineers. Since this is so it seems essential that members of these professions should unite to carry on the educational work which is necessary before it can be brought about.

Here, then, are the essential principles involved, expressed for the most part in the words of experts who have studied the matter in whole and in some of its many ramifications. The quotations which follow have been chosen, from a mass of equally relevant material, with the idea of boiling the subject down to its essentials and answering the chief questions which arise.

The statements immediately following were extracted from hearings before a sub-committee of the United States Senate Committee on Banking and Currency, which met in Washington last February to consider further unemployment relief through the Reconstruction Finance Corporation.

In this country we have a surplus man power now, and consequently any co-operative effort on the part of the Federal Government that will encourage the building of en-

during edifices and public works that are of benefit to society as a whole, socially, esthetically, or from the standpoint of education or public health, in my opinion, is a very wise measure.

CARL B. FRITSCHÉ, M. E., member of the Committee on Aeronautics of the American Society of Mechanical Engineers, Detroit, Mich.

A public-works programme is necessary to start us out of the slump. It is not the only thing. It will not do it alone. But all other reasonable measures would be assisted by it. For instance, if you want to increase commodity prices, public works increases commodity prices by creating a demand for a large number of construction materials. The worker does not buy concrete. He buys shirts and consumer's goods. Therefore, we create a demand for all of those things. And as some one has said, it merely "primes the pump."

OTTO T. MALLERY, economist specializing in unemployment and public works, Philadelphia, Pa.

At the end of the World War our Federal public debt was in the neighborhood of \$25,000,000,000 and nobody worried about the solvency of this country. Nobody questioned but that it was sound.

Today our public debt is \$20,000,000,000, in round numbers.

Suppose it does take a \$5,000,000,000 programme to get this economic engine off dead centre. What of it? Certainly in actual wealth and in potential wealth this country is a far better risk than it was in 1918.

CARL B. FRITSCHÉ.

There seems to be quite a general misconception that since there are ten or twelve million people out of work the Federal Government of course cannot provide jobs for all of those people on public works, so why bother with it at all? The idea is entirely overlooked that construction of public works and the stimulation of public works generally is only one of several means, and it occurs to our minds, perhaps, that it is assisting to prime the pump of recovery, to get business here and to get business there, and to give some jobs in that manner so that we may get back to a position where trade and industry can re-employ these people, as it is only from revived trade and industry that the ten or twelve million people are ever going to get genuine and permanent employment.

MARTIN DODGE, representing the Banking and Industrial Committee of the Second Federal Reserve District.

Engineering studies have gone into this matter very carefully and have indicated that for all public-works construction directly and indirectly about 80 per cent of the cost of the project goes to the laborer, goes to wages and salaries.

And that is distributed over a large area. It offers one of the sound methods of helping unemployed men as well as stimulating business.

MARTIN DODGE.

A bond of obligation issued for the purpose of raising money to be distributed in a dole represents no value. A bond, however, issued for public works represents a needful and economically sound addition to community facilities and the benefits derived therefrom will, in more prosperous times, permit the retirement of the obligation.

To illustrate the economy of unemployment relief by public works rather than by taxation to pay a dole, assume a public-works construction programme amounting to \$3,000,000,000. This involves a charge for interest and amortization of about \$150,000,000 a year. It is estimated that such a programme would give employment to between 1,500,000 and 2,000,000 workers per year, distributed between the construction work and the many industries that serve construction. To support these same workers in idleness would cost the community between \$750,000,000 and a billion dollars a year, as compared to interest charges of \$150,000,000 on a public-works programme.

Money expended in doles or direct relief contributes little to the stimulation of trade, whereas money spent in public works stimulates business not only in the community itself but throughout the material and transportation industries. If the money for a dole is to come out of taxes, as it properly should, since it is ruinous to borrow money to give away, the present burden on the taxpayer would be actually relieved through a public-works programme because the taxpayer will only have to bear the interest charge on the moneys expended. If the Government and its subdivisions must borrow to effect economic relief, it will be far better to invest the funds so raised in community facilities, thereby conserving the public wealth and stimulating a normal resumption of trade.

It is recognized that the word "tax" has come to be a bugaboo to the American public, but it need not be so, if properly administered. As the funds for relief must necessarily come from public sources we have no other alternative than to resort to taxation and we maintain that it is far better to tax for improvement which will raise the standards of living within the community and increase property values

because of an added convenience, than to tax and apportion out these same funds without the production of this asset.

JOHN P. HOGAN, Consulting Engineer, New York City; chairman of the Public Works Committee of the American Society of Civil Engineers.

The balancing of budgets so far as current operations are concerned is desirable and necessary; but it is not necessary to include in such balancing the principal sums invested in useful community facilities. Competent economic opinion has almost universally held that it is wise governmental finance to borrow for public works in periods of depression and to repay out of taxes levied upon the future surplus earnings of prosperity. Public works built at present low wages and price levels and financed at reasonable rates of interest will carry a very low cost and require a relatively lower debt-service charge in the tax rate over years to come. It is good business as well as good tactics to use this opportunity to add substantially to the public wealth.

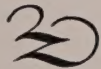
JOHN P. HOGAN.

At this time this is the only way out. Those who still have private means need such encouragement before they will invest their capital in productive enterprise. When the Government borrows money, all it does is to mobilize timid private capital and make it available under public auspices.

SENATOR WAGNER. It is a stimulation to private industry, after all?

MR. FRITSCHÉ. In the long run, it is, unquestionably, and this is the true way to promote dependable prosperity.

CARL B. FRITSCHÉ.

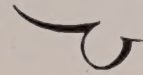


In his statement, Mr. Robert D. Kohn, Chairman of the Construction League of the United States and past President of the A. I. A., made the following remarks about slum clearance and housing which he recommends as being especially suitable forms of public work:

Sir Raymond Unwin, speaking to a parliamentary commission in London about housing, said: "Gentlemen, every £100 that you spend on slum clearance is £100 less paid out in the dole." Every \$1 we put into a thing like cleaning up a city is \$1 less spent on direct charities, and we are actually improving the tax income of the city by that because in New York, although they have given tax exemption on the

improvement in this housing on the buildings themselves, the land value has been so increased by reason of these improvements, the better housing, that the land now returns to the city in every case a larger tax than both the land and the old buildings on the land returned to the city before the housing was built.

The chairman of the Federal Reserve Board, Mr. Meyer, said to the Real Estate Board in New York, that they should not oppose the housing. "You cannot possibly be injured by the competition of these new cheap apartments, no matter how many are built. As a matter of fact you will not be injured as much as you will be injured if you do not give work to people who are out of work." Property values are going to be more injured from the lack of work for workmen than they can possibly be injured by the competition of the new buildings that might be built up.



Those members of the Federal Government now engaged in formulating a plan for work relief are comparing the respective merits of many projects, highly diverse in character and purpose which have been submitted for their approval.

It is, of course, desirable that the benefits of public work be as widely spread as possible. To this end we must support such undertakings as the scheme for reforestation, the construction of needed bridges and tunnels and the extension of facilities for water supply, electrification, and sewage disposal.

The architect in approaching the subject must naturally consider the possibilities of essential building construction. No vital problem has more persistently escaped solution than has slum elimination combined with some means of providing suitable habitations for families in the low-wage-earning group.

We must profoundly believe that the combination of our present circumstances (*i.e.*, unemployment and industrial stagnation, which can be alleviated only through provision by the Government of funds for the creation of work on public improvements) plus the liberalization of public opinion which has grown out of the unavoidable facing of facts during three long years, have removed the solution of housing problems from the realm of the impossible. Believing further that its solution is a primary duty of the architectural profession, we urge on all its members the necessity for informing themselves on this subject.

Under their leadership it can reasonably be hoped that a proportion of the money allotted by the Government to the provision of useful employment may be utilized as well to accomplish a second, equally desirable result: to improve the unhealthful, uneconomic, unsocial surroundings in which such a large majority of our population are now condemned to dwell.

Numerous questions arise whenever the words "public works," "slum clearance," or "housing projects" are introduced into conversation. On the following pages it has been our intention to phrase for the reader some of the questions which most often recur in this connection. They make no pretense of exhausting the subject or of going much below the surface of the matter under consideration. It is our desire, rather, to indicate what form such queries usually take and by answering them authoritatively to show how much ground has already been gained in what we conceive to be the right direction.



Mr. David Cushman Coyle, to whom we submitted one list of questions on the economic implications, is a consulting engineer who has devoted much time to the consideration of modern economic problems. He has made notable contributions to the subject, both in writing and speaking before many organizations. He was among those invited to present their views before the Senate sub-committee above mentioned.

Can the Federal Government, by appropriating funds with which to finance extensive necessary building construction projects, materially improve our present economic condition?

Yes, provided work is undertaken on a sufficiently large scale. Private capital investment is no longer an adequate source of consumer buying power. To the extent that the Government can put men who are now unemployed to work on useful projects it can replace private investment as a source of buying power, thus bringing about a resumption of business activity, without creating dangerous quantities of new commercial debt.

Under existing circumstances can the Government "afford" to embark on such an undertaking?

So long as action on an adequate scale is postponed, the depression continues to deepen

and the Federal revenues to dry up. The Federal deficit can be wiped out only by increasing expenditures enough to end the depression.

In what manner can the Government obtain the funds with which to carry out a public-works programme?

The public must be aroused to the need for immediate action, in order to permit the sale of Government bonds. It will be necessary at the same time to expand currency or bank credit, and the Federal Government must hold absolute authority to force banking co-operation.

What general requirements must be fulfilled by work projects before they may be expected to accomplish the desired result?

They must be obviously useful and carried out in an efficient and workmanlike manner, so as to maintain public support for an adequate volume of expenditure. They should not be of such a nature as to duplicate the undertakings of private enterprise.

Must all Government work projects be financially self-liquidating?

On the contrary, a self-liquidating project is a burden on the consumer buying market, the same as a commercial plant. Only non-self-liquidating works are of permanent value in creating sound business conditions.

Is it desirable for the Government to do its building during depressed periods rather than in times of normal business activity?

Business stability requires high and increasing public expenditure. The rate of increase should be greater during depressed periods, but any tendency to reduce public spending during prosperity will tend to bring on depression. A constantly rising rate of public spending is the necessary adjustment to rising technological productivity.

Do projects involving the clearance of slums and the erection of model housing meet the above specified requirements of economically sound work relief?

The social advantages of better housing are sufficient to justify it. So far as its effects on permanent prosperity are concerned, the essential factors are these: Enough old building must be torn down to prevent an oversupply of space with its consequent bankruptcies; and it must be recognized that so far as the projects are self-liquidating they add nothing to the buying power of the community in the long run.

In what manner and to what extent may private enterprise be affected by competition from model housing?

Unless a sufficient quantity of existing property is acquired and destroyed, in the course of the general public-works programme, to prevent an oversupply of housing, there is no escape from serious dislocation of private enterprise.



Mr. Clarence Stein, who has spent many years in the study of housing and community planning, has won for himself a reputation as an authority on these matters which is equalled by few American architects. No one has a broader understanding than he of the difficulties which these problems present, nor has any one clung more persistently to the belief that they would eventually be overcome and so striven more determinedly to bring this about.

Here are the questions put to him, and his answers:

What is the difference between restrictive and constructive housing legislation?

1. Restrictive legislation attempts to improve housing conditions by the exercise of police power. Legislation such as the New York and New Jersey Tenement House Laws has done much to improve living conditions by setting up minimum standards of construction, safety, and sanitation for individual builders. But these minimum requirements, based on small-scale development, have become maximum attainments. Restrictive legislation merely says "thou shalt not" and applies only to the individual speculative methods of development.

2. A constructive housing policy has been found necessary because of the inadequacy of private initiative. The Commission of Housing and Regional Planning of the State of New York in its proposal for permanent housing relief dated February 18, 1926, said:

"When private building for profit satisfies the immediate housing demand of 30 per cent of the population, further construction becomes unprofitable. Construction usually continues as long as the market is 'favorable,' or until evidence of surplus is discovered in a downward trend in the higher rentals. Then the lending agencies become conservative and private building stops. The cycle revolves slowly. Even this limited surplus is infrequent. And this small

and occasional surplus derived from housing construction intended to satisfy the demand of only 30 per cent of the population represents all that commercial enterprise ever provides to meet the constantly increasing needs of 70 per cent of the population. At all times and in all places, private enterprise has been unable to supply adequate housing to meet the needs of the underlying population.

"This condition has always prevailed. Building on a speculative basis is confined to a field which offers the margin of profit that speculative enterprise requires. The speculative method is based on a series of negotiations, a combination of independent activities and a heaping up of small profits which accumulate to put the newly constructed dwelling quite beyond the reach of the average family.

"The average family must be content with the left-overs—and there are never enough of these to permit adequate housing for more than half the population.

"A system of producing houses which is geared to satisfy less than one-third of the current requirement of society must be accounted a social failure. It may function satisfactorily in its limited field but it must be supplemented by some other producing agency if the social need for housing is ever to be satisfied."

3. Constructive housing legislation is intended to give Government a direct responsibility for producing high-standard and low-cost housing. Only through constructive legislation is it possible to prevent the continued social degeneration of our slums and the economic deterioration of our cities caused by blight.



In what ways can Government take a constructive part in large-scale community housing that will give benefit to the occupant of the house rather than to the speculative builder?

1. By direct action.

By direct Government construction and management, as in many countries in Europe. Or—

By a municipal housing authority as is now proposed in a bill before the legislature of the State of New York.

2. By direct Government subsidy to limited-dividend companies or municipalities, as in England, Holland, etc.

3. By indirect subsidy to limited-dividend companies:

a. By tax exemption, as in New York City (on buildings alone).

b. By federal income-tax exemption on stock dividends.

c. By charging a low rental on land owned by city, as proposed for Chrystie-Forsythe Street property owned by City of New York.

d. By municipal purchase from housing companies of land not covered by building, as in the development of the Prudential Life Insurance Company in Newark.

4. By lending money at:

(1) A low rate of interest.

(2) For large part of cost of project.

(3) For a long period, *i.e.*, at low rate of amortization.

What is the best form of constructive assistance?

Either—

1. Direct action of Government.

2. Lending large amounts of money at low rates of interest and amortization to companies which are restricted so as to prevent speculation and poor housing.

3. Direct subsidy—but only for those who cannot be decently housed on an economic basis.

There should be *no indirect subsidies*.

All the cost of housing should be apparent. The more clearly the books are kept, the more incentive there will be to find more economical ways of producing decent homes and communities.

What form of constructive Governmental housing machinery now exists in this country?

The only important example that has been tested by experience is the New York State Housing Law. Its essential features are:

1. The Government gives tax exemption on buildings, and the right of eminent domain.

2. The limited-dividend company accepts:

a. Limitation of 6 per cent return on investment.

b. Limitation of rentals, and

c. Supervision of the State Housing Board.

3. The mortgagee (in the past, insurance companies and savings banks, now the Reconstruction Finance Corporation) accepts limitation of 5 per cent interest.

What development has taken place in State laws during the past year and why?

Reconstruction Finance Corporation money, under the Emergency Relief and Construction Act, July, 1932, has been available to private corporations "formed wholly for the purpose of providing housing for families of low income or for reconstruction of slum areas, which are regulated by state or municipal laws as to rents, charges, capital structure, rate of returns, areas and methods of operation. . . ." So as to take advantage of these loans State housing laws have been passed in Ohio, Texas, and New Jersey (not yet signed by the Governor), and proposed in Arkansas, Delaware, Oregon, Minnesota, Massachusetts, Missouri, Pennsylvania, Indiana, Illinois, Wisconsin, California, and the District of Columbia.

Why, in spite of the fact that the Emergency Relief and Construction Act was passed, has no construction of housing with Governmental money taken place?

1. Difficulty of securing equity money, *i.e.*, the difference between cost of project and two-thirds offered by the Reconstruction Finance Corporation.

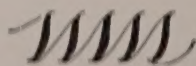
2. Even limited private initiative has disappeared.

How can we start a large programme of housing and city rebuilding?

This is possible at the present time only through direct Governmental action. States or municipalities should appoint Housing Authorities similar in structure to the Authority of the Port of New York. Through such an agency money made available by the Federal Government for the purpose of relieving unemployment can be applied directly and effectively to the rebuilding of the rotting areas of our cities.

These bodies should be vested with corporate power and should be able to condemn, acquire, and replan areas for the purpose of rehabilitation and community building.

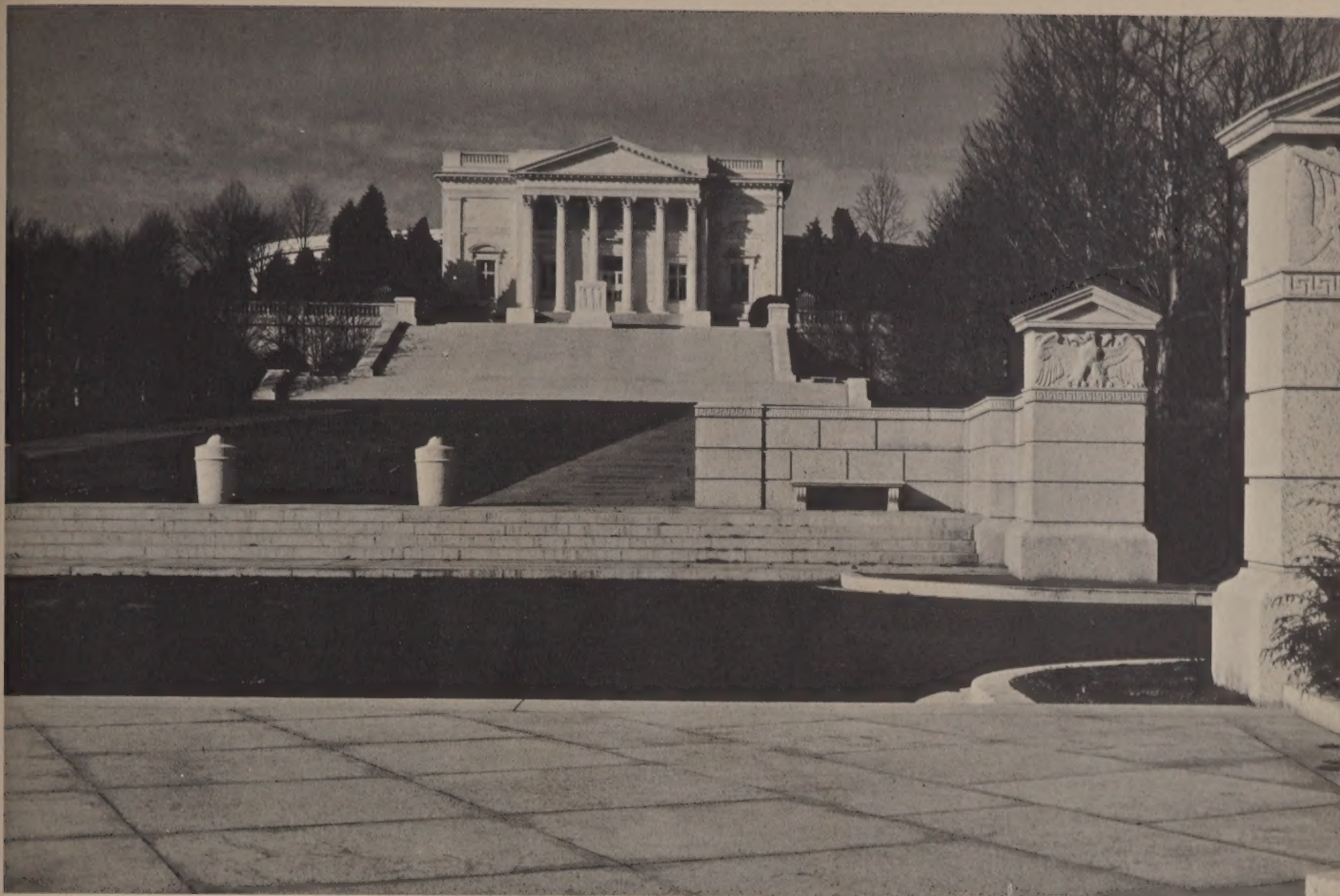
Such agencies should plan, construct, and manage housing developments. At a future time, it may be possible to set up private companies to take over these developments. At the present time it is unlikely that the large amount of work that is needed, to affect the unemployment situation to any extent, can be carried on effectively and efficiently by other than direct Governmental agencies.







BASILICA PATRIARCAL,
MONTERREY, MEXICO
From the pencil drawing by E. M. Schiwetz



Photographs by Theo. Horydczak

Tomb of the Unknown Soldier and Approaches, Arlington, Va.

THOMAS HUDSON JONES, SCULPTOR

LORIMER RICH, ARCHITECT

The Amphitheatre, completed about 1917 as a memorial to the soldiers and sailors of all wars, was a single item unrelated to any broad scheme of treatment in Arlington. The architect's present task consisted of bringing this large building into relationship with the whole scheme while furnishing a fitting site for the Tomb of the Unknown Soldier. As the result of a competition held in 1928, five of the architects and sculptors entering that competition were selected to restudy their schemes and resubmit them with models of the Tomb itself. After the appointment of Messrs. Jones and Rich as sculptor and architect of the Tomb, Mr. Rich was further commissioned to design the approaches



*Plan of the approaches to the Tomb.
Lorimer Rich, architect*



« ARCHITECTURE »

*The Tomb as one approaches from below.
Thomas Hudson Jones, sculptor; Lorimer Rich, architect*



One arrives at the Tomb on the roadway in the foreground, leaving the conveyance and walking on foot up the gentle slope which is walled in at either side by a magnificent hedge of beech thirty feet in height. (Being but newly planted and without foliage, the hedge in this photograph lacks the impressiveness that it in reality possesses.) Lorimer Rich, architect



The panel on the front of the Tomb, facing Washington and the Potomac, bears three figures commemorative of the spirit of the Allies in the war—Victory in the centre, Valor on the left, Peace on the right with her palm branch to reward the devotion and sacrifice that, with Courage, made the cause of righteousness triumphant. Each side is divided into three panels by Doric pilasters, in each panel of which is carved an inverted wreath. The Tomb above its sub-base is made of only three pieces of marble—base, the block containing the sculpture, and the top slab. The marble is from Yule, Colorado, the same as that used in the Lincoln Memorial. Thomas Hudson Jones, sculptor; Lorimer Rich, architect



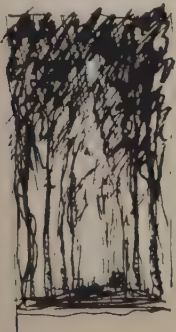
The Tomb from the rear. In the distance at the right one catches the glint of the Capitol dome. Thomas Hudson Jones, sculptor; Lorimer Rich, architect. The lettering of the inscription was designed by August Reuling

Drawing as a Basis for Etching

By Gerald K. Geerlings



The marginal illustrations herewith are from fountain-pen notes made on the backs of menus, envelopes, or what



HERE is no architect-made etching in existence that I cannot spot from across the room. Why is it that usually architects can't draw?" So queries the secretary of an etching society.

"When you make an etching, for heaven's sake don't make it look like an 'architect's drawing.'" The advice which one of the leading print experts of New York gave me.

Any architect is apt to resent that, of course. Not draw? Preposterous. Why, since the age of seven—

Viewing architectural drawings done out-of-doors quite dispassionately, however, rather brings one around to agree. When an architect produces drawings with the aid of T-square and triangle he records facts and realities. The final result bears the stamp of authority. But when the architect goes out to sketch, freedom from office restrictions seems to make him less responsible. His sense of selection does not function conscientiously. He is led astray by trying to draw as he thinks he remembers some one else did, instead of recording truth to the best of his ability. Lines (particularly ridge lines on old houses) become doddering. Loosely defined shadows smother detail where it would be most informative. The sun invariably beats down with Andalusian brilliance. All surfaces glisten like the Elgin marbles. The result lacks definition, solidity, and conviction.

It is not that the outdoor drawing should resemble a labored office production. But it should not depend on flashy cleverness, catchy "picturesqueness," or repetitious tricks copied from some one else. It should have the sincerity which makes a Meryon etching vital. Particularly should this be true if the drawing is to be a reference guide for an etching, for in that medium the form must be expressed in individual lines and cannot depend on indefinite pencil smudges. Examine the work of any artist who is truly great (a form of recreation indulged in far too infrequently), and you will find the immortal quality is dependent primarily on straightforward, intelligent drawing. Not just an embroidery of inconsequential lines, but an economic structure of only the essential ones.

Almost any one can do a drawing of a million lines, but only a master can express the same truth in one hundred lines. Analyze any masterly etching or drawing and you will find the engineering bones underlie the whole structure. The mood of the subject has been studied and the chiaroscuro determined accordingly. Short-cuts are not resorted to. Each square millimetre has informative, vital lines, not meaningless straws. Lines are drawn as true as the artist's ability permitted. When a single surface, such as a roof, is depicted, there is not a false mosaic of the whitest whites and darkest blacks. In a word, there is evidence that the subject has been studied, planned, lived with.



not, in an attempt to catch a bit of action or character for later development as accessory figures in etchings





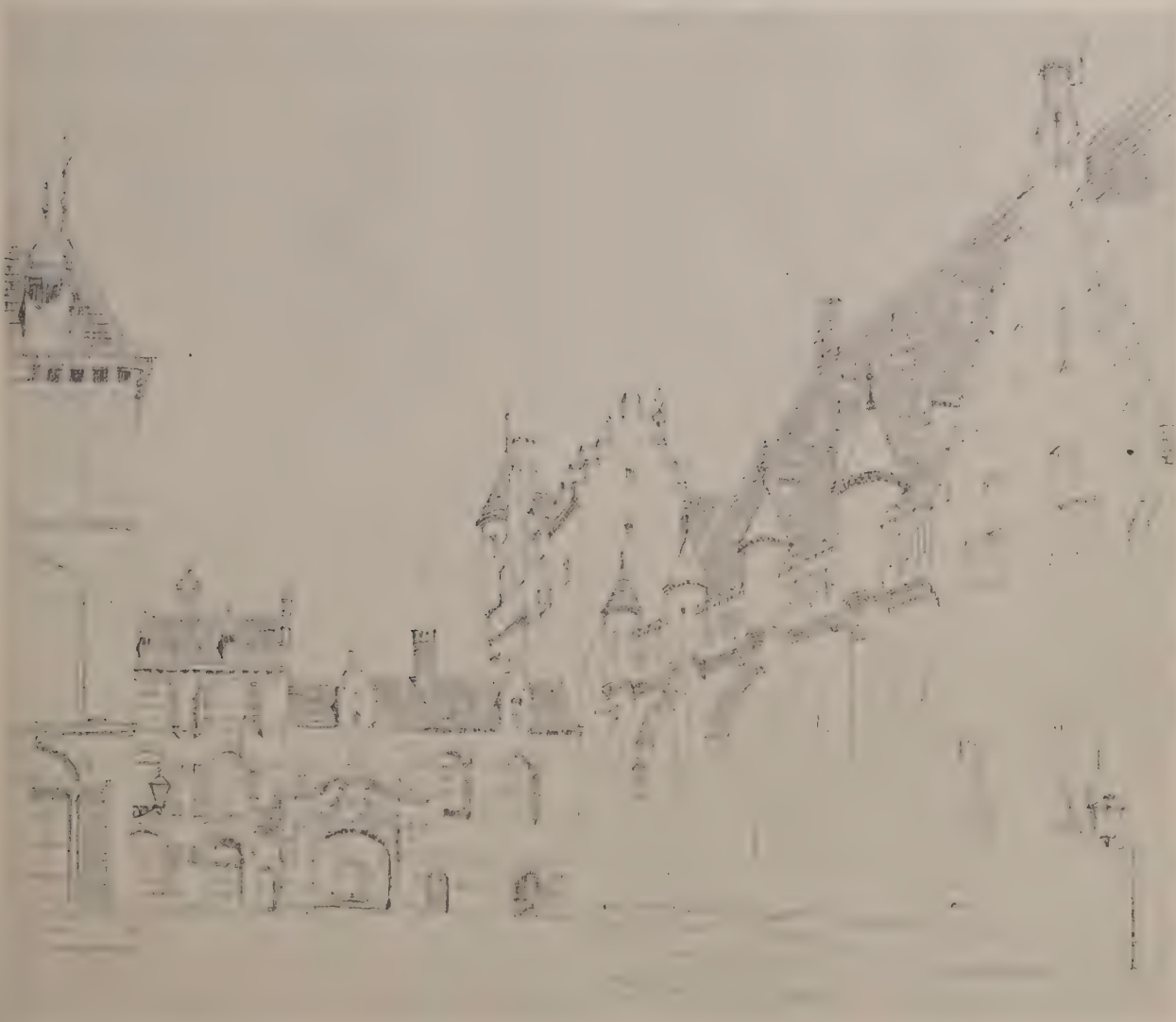
*Alkmaar, Holland; the Weighing House at Cheese Market, 1929.
Other details, not reproduced, were made showing studies of porters,
onlookers, reflections, cheeses, and the like*

Every artist should of course develop his own method of working. By no means are the drawings here reproduced meant to be held up as models. They are perhaps of interest because of being working drawings drawn on the spot, untouched thereafter, and executed standing up—I never am able to find a place to sit down to get what I want. Obviously they are not finished drawings; rather are they outlines for essays to be built around them later with the various details (not shown). None of them will be used as it is. Each will be composed and combined, providing it serves the purpose of creat-

ing a satisfactory interpretation of a theme. Their value to me lies in the architectural anatomy which they record, in their suggestion of masses and compositions, and in the pattern of shadows (these are mostly in outline rather than filled in). In all cases 2B “black chalk” or “carbon” pencil (synonymous terms) was used on a heavy grade of white vellum, except in the Chicago drawing on page 264, where charcoal tones were added. All reproductions are reproduced at the actual size of the originals, except the frontispiece, which has been slightly enlarged.



Above—Friesland, Holland; a composite landscape. Below—Binnen Hoff, The Hague, 1929; both of these from the pencil drawings by Gerald K. Geerlings





Chicago: Michigan Boulevard, looking north, 1930. From the pencil drawing by Gerald K. Geerlings. The upper insert sketch is one of several made in establishing a desirable viewpoint; tones in the lower drawing consist of charcoal "washes"



Photographs by
Ben V. Matthews

*Hinge for one of the side doors of narthex, church at Winston-Salem,
built up of three flat pierced plates of steel. Mayers, Murray &
Phillip, architects; craftsmanship by Ostrander & Eshleman*

Lamination in Metal Work

By Eugene Clute

PLATES and sheets of metal were hard to produce in the days before men had the heavy machinery needed to roll them from the billets and the power to operate it. Now they can be rolled easily and cheaply. While the old-time workers made little use of metal in this form, we may use plates and sheets freely and with advantage. They can be had in various thicknesses at moderate cost. Bold relief, effective scale, and a lively play of light and shade can be secured by lamination in metal work with comparatively little expenditure of labor.

One of the most natural things to do with a plate of metal is to cut out a design in silhouette. It is only a step further to pile up cut-out plates one upon another to form a design and fasten them together. It is surprising that the possibilities that lie in lamination seem to have been overlooked by designers until within the last three or four years. Now, however, several architects and craftsmen are working along this line, with some admirable results.

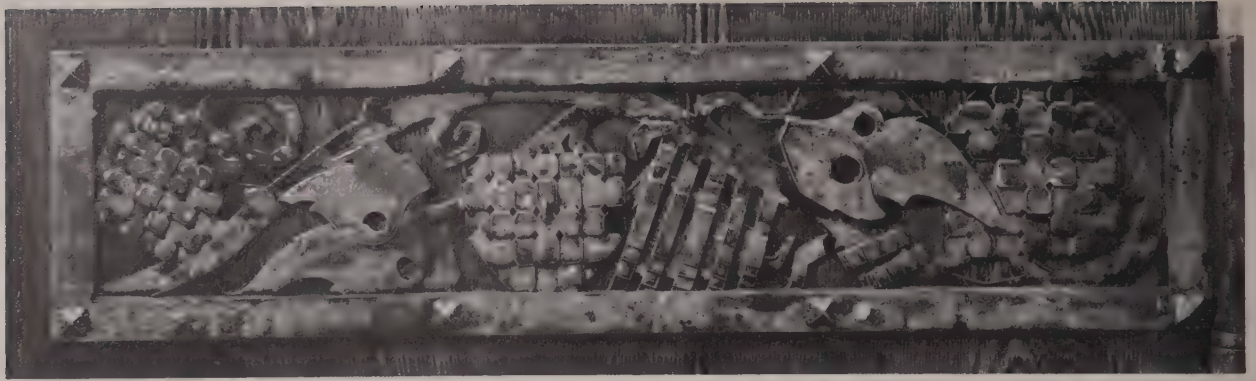
Among the most interesting examples of this technique are the hinges upon the exterior doors of the recently completed Centenary-West End Methodist Episcopal Church, South, at Winston-Salem, N. C., which are shown here by photographs and working drawings. They are the result of evolution from the limited use of lamination in the hinges of the Church of the Heavenly Rest, New York City, which was built about four years ago by the same architects, Mayers, Murray & Phillip.

The hinges at the Church of the Heavenly Rest are very rich examples of costly hand craftsmanship, elaborately pierced, engraved and chased in a decoratively treated pictorial design of local historical significance. Lamination is employed in them only as an auxiliary method, a single plate being applied in certain parts to give the required depth.

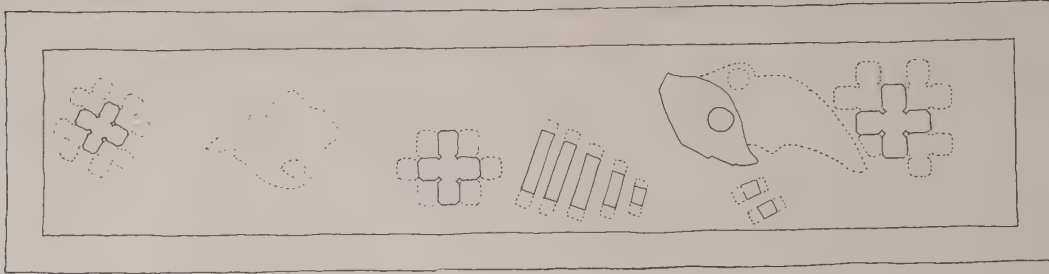
Desiring to do something equally good in its way, but much less elaborate, for the church at Winston-Salem, the architects set about developing the designs of these hinges on the basis of lamination, with simple piercing, and in this way they became pioneers in creating a new technique in craftsmanship and a new manner of design growing out of its requirements.

In order that the designs might be fully studied in the third dimension, which is so important in laminated work, they constructed full-size cardboard models of the hinges by gluing cut-out layers of cardboard together. To study the effects of color and texture upon the designs, they applied aluminum paint and black paint to these models to simulate the appearance of half-polished wrought iron.

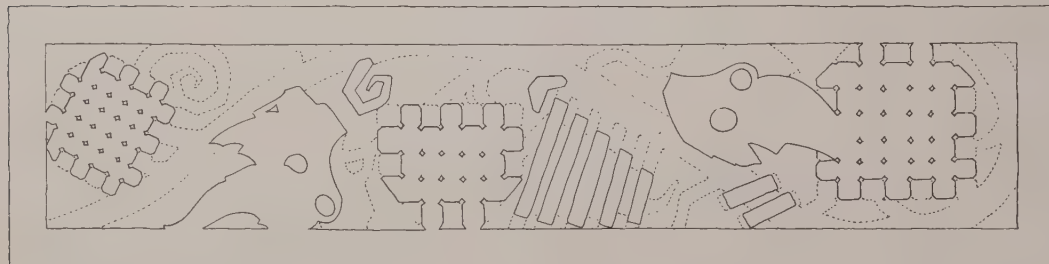
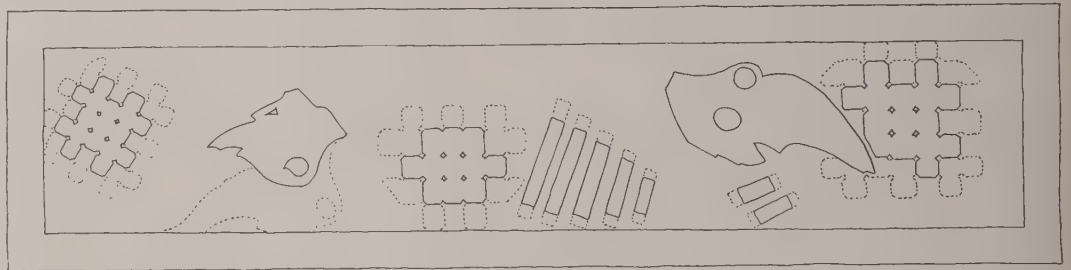
When the craftsmen—Ostrander & Eshleman—received the full-size drawings they made templates of metal for use in marking the designs upon the sheet metal. They engraved the outlines of the pieces by hand, following the templates, then cut out the pieces with a hack saw. The piercing was done also with the saw. Next they filed the pieces exactly to the engraved outlines.



Above, the finished hinge for the chapel door, using four plates as detailed below

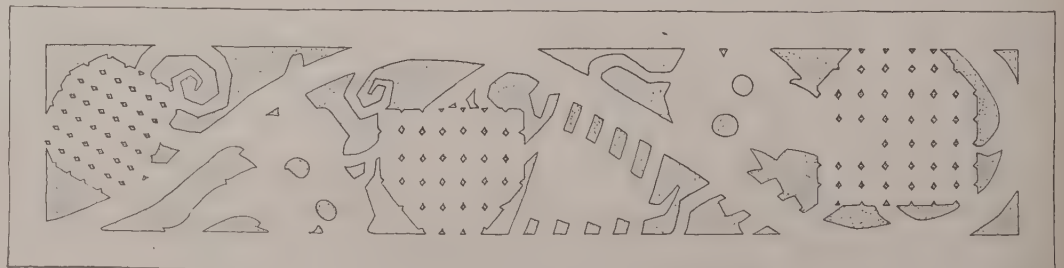


At right, plate No. 3; above, plate No. 4. In each drawing the plate next below is shown dotted



At left, plate No. 2. This and the two above are each $\frac{1}{8}$ in. thick, the bottom plate being $\frac{1}{4}$ in.

At right, plate No. 1, next to the wood. The perforations are shown stippled



In order that no screws, rivets, or other means of attachment might show upon the face of the work, it was determined to fasten the laminations together with pins fixed to the back of each piece. Therefore, the templates were

spotted for the pins and for the holes to match them, drilled and fitted together. Then, the locations of pins and holes were transferred to the plates with a center-punch. The pins, of a non-ferrous metal, were brazed to the backs of



One of the hinges for the main entrance door. There were eight of these, the symbol in the vesica form changing. Two of the variations are pictured at left and right, with the four plates of the eagle superimposed below.



the pieces and the holes were reamed on the backs of the plates to form conical recesses.

There are knuckles at one end of each back plate of the hinges for the chapel and narthex doors, forged from the same piece, to fit upon a pintle set in the stone jamb. The hinges in the main portal have separate decorative plates. For ease in forging these knuckles, and because it can be had in desirable thicknesses, high-grade American steel was chosen as the material for the hinges. In passing, it may be noted that these hinges work easily and smoothly, for the knuckles, excepting in the hinges of the chapel doors, rest upon Tobin bronze bearings in the pintles, so designed that they may be screwed up or down and secured by a lock nut. By this

means it is possible to obtain proper adjustment and make each hinge bear its share of the weight.

To prevent rusting, each part was separately cadmium-plated by a process that insures a lasting and impervious coating. Then the parts were assembled, the pins on the back of the topmost plate being inserted in the holes in the next plate below it and spread out with a hammer and punches to form countersunk rivet heads in the backs of the holes. Any projections of the pins were filed down flush with the back of the plate. The same method was carried on progressively, each plate being attached to the one beneath it, down to the back plate. As a result, any water that may find its way between the plates can do no harm, for



A simple three-plate strap hinge of steel for the Bathing Enclosure, Jones Beach State Park, Long Island. Designed by Herbert A. Magoon, architect of the Long Island State Park Commission; craftsmanship by Ostrander & Eshleman

each plate is completely enclosed in a material that does not rust, and the pins, being non-ferrous, cannot rust. The back plates are one-eighth inch thick and the laminæ are one-sixteenth inch thick. Four plates are used in the hinges of the doors in the main entrance and the chapel, and three plates in those for the narthex aisle doors. A half-polished finish was produced by the application of a black coating which was removed from the prominences and allowed to remain in the depressions of the surface. The texture is that produced naturally by the process of plating with cadmium, a wrinkled grain effect; there is no hammer marking or other applied texture. The metal was worked cold excepting the forging of the knuckles.

The same method has recently been employed by these craftsmen in executing the laminated hinges for the bathing enclosure at Jones Beach, State Park, Long Island. These hinges also are of high-grade American steel. They have a half-polished finish produced by applying a chemical that turns cadmium black. This is neutralized before its action has progressed far enough to harm the plating as a protective coating, and the neutralizing reagent is removed by thorough washing. Then, the resulting patina is polished off of the prominences.

Practically any metal can be used for laminated work, such as: nickel-chrome steel, Monel metal, bronze, nickel-bronze or aluminum, as well as wrought iron and mild steel. When a non-ferrous metal or alloy-steel is used which does not require protective plating, the parts can be joined by welding. Work in wrought iron and mild steel, when not to be exposed to the weather, may be unprotected and can be welded. Monel metal, various copper-base alloys, aluminum, and wrought iron may well be

welded with the oxy-acetylene torch. Spot welding with the electric arc is much used in joining parts of mild steel or nickel-chrome steel. The danger of burning the metal in spot welding can be minimized by placing a thick metal plate as a backer behind the work during the process and focussing the arc in the backer instead of the work.

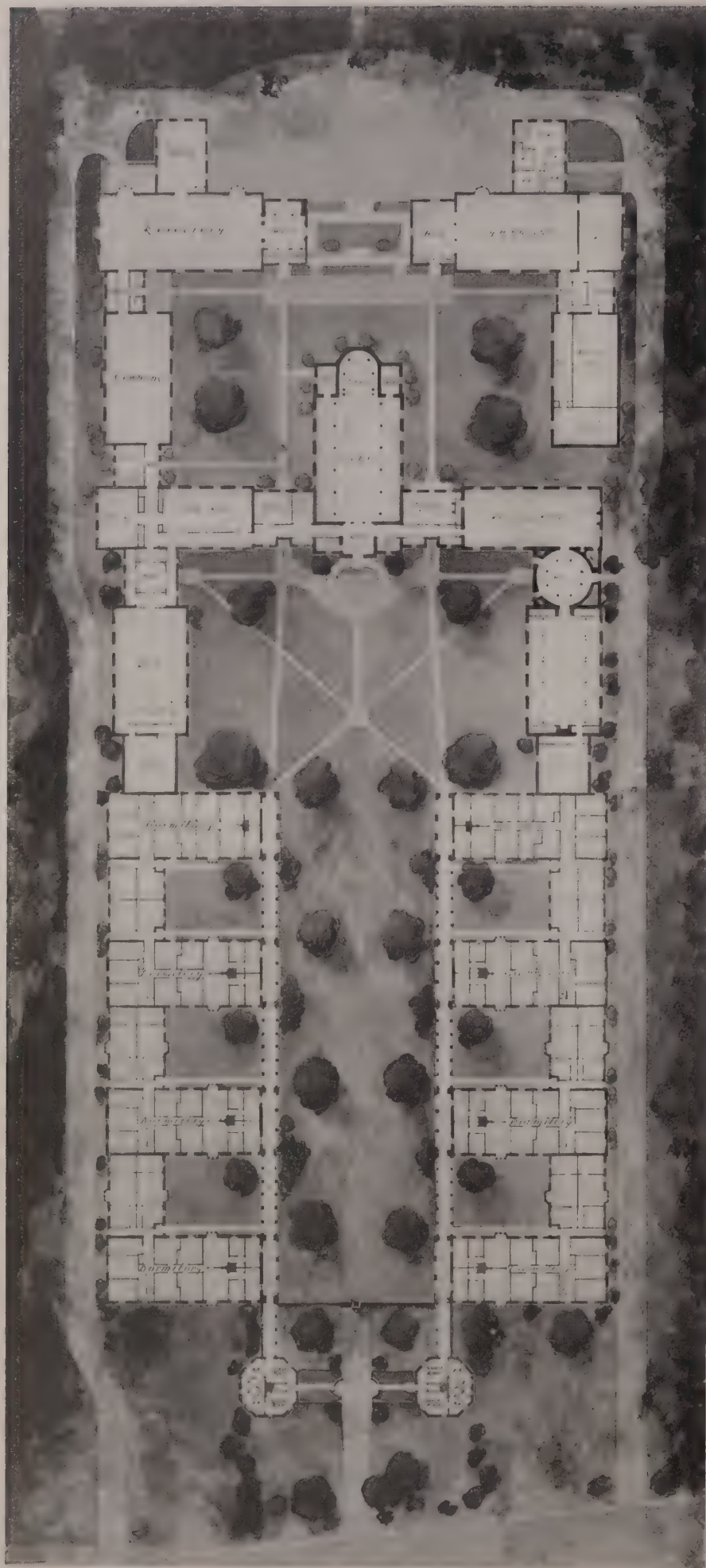
Lamination is just as applicable to the making of grilles, banking screens, doors, or any other architectural metal work as to the making of hinges. That it lends itself readily to designs of a traditional character is well demonstrated by the suitability of these church door hinges to their place. Something very like this, we may assume, is what the mediæval craftsmen would have done if plates of metal had been as available in their times as they are in our day.

There is nothing to prevent the combination of various metals in laminated work, if those metals which tend to set up destructive electrolytic action are not used together, or if they are used with effective electrical insulation between them. A new method of electrical insulation developed by Oscar B. Bach, and employed in the making of the colossal repoussé decorations in combinations of various metals for Radio City, makes it possible to use any desired metals together freely. As a rule it may be said that metals of a more or less similar nature may be used in combination without insulation. For example: bronze, Monel metal, nickel-bronze, and copper; or iron, steel, and nickel-chrome steel. Iron and copper are frequently combined. Care should be used in combining other metals, the special conditions to which the work is to be subjected being taken into account and met by the precautions of an experienced craftsman.



The Yale Divinity School
New Haven, Conn.

DELANO & ALDRICH, ARCHITECTS



THE authorities in charge of the new Yale Divinity School, and the architects, were in accord in their desire to carry out the programme in a kind of architecture which, first of all, should avoid elaboration, richness of ornamentation, and the consequent added expense; and, second, should express in a free and untrammelled way the traditions of old New Haven, of which the key is struck by the ancient buildings of the University and the town and especially by the three churches on the Green, unique in America, or anywhere else for that matter. The scheme was worked out along these lines with the result that while some other recent buildings destined for purely secular use are of a mediæval architecture usually associated in the public mind with the Church, the Divinity School itself, dominated by its Chapel and dedicated to religious education, is in the cool and restrained Georgian of Puritan New England.

« ARCHITECTURE »



A view from the upper end of the campus where the Chapel dominates the dormitory ranges. Although quite different in detail, there is something in these buildings that is akin to Jefferson's University of Virginia

These buildings depend for their interest almost entirely upon their form and grouping, determined largely by the levels of the site. The ground slopes gradually from the entrance up to the dominating Chapel at the highest point, behind which on a broad grassy terrace are the Commons and Refectory on one side, and the Gymnasium, hand-ball courts, etc., on the other. Beyond this the land slopes steeply down. In front of the Chapel, on a wide campus, are the Libraries, entered through a circular rotunda, and the Auditorium, and in front of these again the dormitories with grass courts between,

connected by arcades. Flanking the entrance are the two small octagonal guest houses. All of these buildings are of simple masonry in a warm pinkish brick which comes from kilns near New Haven. In the Chapel itself an effort has been made—and apparently appreciated—to give a churchly atmosphere while holding to the Georgian style. We believe that the buildings speak for themselves and that they hang together as a unit in expressing the rather austere type of feeling and teaching associated with the Yale Divinity School, one of the oldest institutions in New England.

◀ ARCHITECTURE ▶



In the Chapel the simple rectangular plan with its apsidal chancel carries forward into a more sophisticated age the dignity and austerity of the colonial meeting-house



On the page facing, a detail of the chancel. The lighting fixtures were executed by Cox, Nostrand & Gunnison from the architects' designs; the central fixtures are of chrome-plated brass, glass rods and a spiral arrangement of the lamps around the central support—the eagle and tassel are gold-plated

The circular hall connecting the Library with the Reading Room, shown on the plan (page 270) to the right of the Chapel

« ARCHITECTURE »





Above: the Commons Room, in which one unusual feature is found in the lighting fixtures of carved wood, touched with gilding. Below, a corner of the Reading Room





A PHOTOGRAPHIC STUDY BY ROBERT MACLEAN GLASGOW
Entered in a contest held by the National Alliance of Art and Industry, this photograph was selected as one of the "hundred best"



The Christian Science Publishing Society's building, now being erected in Boston. It is to have a length of 600 feet, and will be completed later this year. Chester Lindsay Churchill, architect



The Home Office Building, Metropolitan Life Insurance Company, New York City, recently completed. D. Everett Waid and Harvey Wiley Corbett, architects

The foundations are in for this annex to the Post Office Building on Ninth Avenue, New York City. McKim, Mead & White, architects

Below, the Benjamin Franklin Memorial and Franklin Institute Museum, Philadelphia, now nearing completion. John T. Windrim, architect



A model of Old State House Square, Hartford, Conn., with the post-office building demolished and the park restored (with underground parking space) about the Bulfinch State House. Lester Beach Scheide, Inc., architects; model by Elizabeth Judd Scheide



Façade of the American Philosophical Society's new building proposed for Philadelphia, for which a site on the Parkway has been acquired. Paul P. Cret, architect



Photographs



The Dime Savings Bank Building, Brooklyn, which is to be decorated with a bronze tablet as the recipient of an annual award by the Brooklyn Chamber of Commerce. Halsey, McCormack & Helmer, Inc., architects



Sundial designed by Cass Gilbert and presented by Mr. and Mrs. Gilbert to Shakespeare's Garden, Stratford-on-Avon. The panels, representing the seven ages of man, were modelled by John Donnelly, and the stone cutting done in England



The new school building for Florham Park, a section of Madison, N. J., not all of which building is to be built at once. Rasmussen & Wayland, architects



"There ought to be a law"—but apparently it has not yet been put on the statute books, for the creation on the left exists in Los Angeles, and that on the right in Portland, Ore.



BOOK REVIEWS

COMPOSITION AND RENDERING. By A. THORNTON BISHOP. 128 pages, 7 by 10½ inches. Illustrations from pencil drawings. New York: 1933: John Wiley & Sons, Inc. \$2.75.

Mr. Bishop, whose pencil drawings are widely and favorably known, lays great stress in this volume on composition, discussing its essentials, and showing parallel drawings illustrating possession of and lack of the fundamental qualifications. He presents also a detailed exposition of pencil indication of building materials and accessories. There is also a chapter on composition in the theatre.

GARDENS AND GARDENING. Edited by F. A. MERCER. 128 pages, 8 by 11½ inches. Illustrations from photographs and plans. Printed in Great Britain. New York: 1933: The Studio Publications, Inc. Cloth, \$3.50; wrapper, \$2.50.

This is the second issue of *The Studio Gardening Annual*—a creditable relative of *The Studio's* year books on various subjects. In addition to almost inspiring photographs of the gardens of many nations, there are constructive articles on the flowering shrubs, small gardens for pleasure and profit, and perennials in the modern garden, and a few illustrations of some new and lesser-known plants.

SHEAR TESTS OF REINFORCED BRICK MASONRY BEAMS. By D. E. PARSONS, A. H. STANG, and J. W. MCBURNEY. 20 pages, 6 by 9¾ inches. Illustrations from photographs and diagrams. Research Paper No. 504. Pamphlet binding. Washington: 1933: U. S. Department of Commerce, Bureau of Standards. 5 cents.

NEW ORLEANS. Its Old Houses, Shops and Public Buildings. By NATHANIEL CORTLANDT CURTIS. 267 pages, 5¾ by 8¾ inches. Illustrations from two drawings in color, photographs, line drawings, and maps. Philadelphia: 1933: J. B. Lippincott Co. \$3.50.

The old saying that a city has a physiognomy could scarcely be better exemplified than in the case of New Orleans, and the author, who is an architect and a lecturer at Tulane University, has successfully caught the characteristics that give New Orleans its distinct individuality. Mr. Curtis not only has an inspiring subject for his book, but displays unusual charm in unfolding it.

THE NEW ILLUSTRATED GARDENING ENCYCLOPÆDIA. Edited by RICHARD SUDELL. 1152 pages, 5½ by 8 inches. Illustrations from photographs and drawings, with colored frontispiece. Printed in Great Britain. New York: 1933: Charles Scribner's Sons.

As soon as the amateur gardener has passed the early stages of his fever, the seed catalogues and the specialized reference books will tax more and more

frequently his ability to find answers to questions that arise in his work. Here is a book designed to answer many of those questions through easy alphabetical access to subject matter and to data concerning individual plants. Moreover, certain sections dealing with popular specialties are treated much more fully and in accordance with the latest approved practices. There is even a special calendar of garden operations by months, the months being found as headings in the regular alphabetical sequence.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS GUIDE, 1933. 831 pages, 6 by 9 inches. Illustrations from diagrams. New York: 1933: American Society of Heating and Ventilating Engineers. \$5.

An indispensable collection of reference data on the design and specification of heating and ventilating systems. These annual volumes, of which this is the eleventh, bring a fast-moving science up to date in the practitioner's office.

THE NEW VISION. By MOHOLY-NAGY. Translated by DAPHNE M. HOFFMANN. 191 pages, 7½ by 10 inches. Illustrations from photographs, paintings, and sculpture. Printed in Germany. New York: 1932: Harcourt, Brace & Co. \$5.

Here is a detailed analysis of a new attitude toward art education, largely as put into practice by the Bauhaus. The author was a lecturer at the Bauhaus in Weimar and Dessau, 1923-1928, and has had the benefit of practical experience with these new theories of teaching.

PENETRATION OF DAYLIGHT AND SUNLIGHT INTO BUILDINGS. 2d edition. Illumination Research Technical Paper No. 7. 34 pages, 6 by 9¾ inches. Illustrations from diagrams and graphs. Pamphlet binding. Printed in Great Britain. New York: 1932: His Majesty's Stationery Office (The British Library of Information). 20 cents.

CODE FOR PROTECTION AGAINST LIGHTNING. 93 pages, 5 by 7½ inches. Illustrations from photographs. Handbook of the Bureau of Standards, No. 17. Pamphlet binding. Washington: 1932: U. S. Department of Commerce, Bureau of Standards. 15 cents.

There has been a tendency in this generation to regard protection against lightning as more or less of an outworn fetish. As a matter of fact, the annual fatalities from lightning in the United States are about 500, with about 1300 injured. Moreover, in Iowa, over a five-year period, there were twenty-nine unprotected buildings destroyed for every rodded building destroyed by lightning—and this in the face of a large proportion of obviously defective installations.



Photographs by Alexander Piaget

The Music Room. Walls are sand-finished and smooth white plaster; the ceiling gray. There is a parquetry floor with black border in oak; lapis-colored baseboard; ebonized colonnettes with gray marbled capitals. The curtains are silver, gold, and yellow. Furniture and lighting fixtures were designed by the architects

Public Rooms of The Park Plaza, St. Louis, Mo.

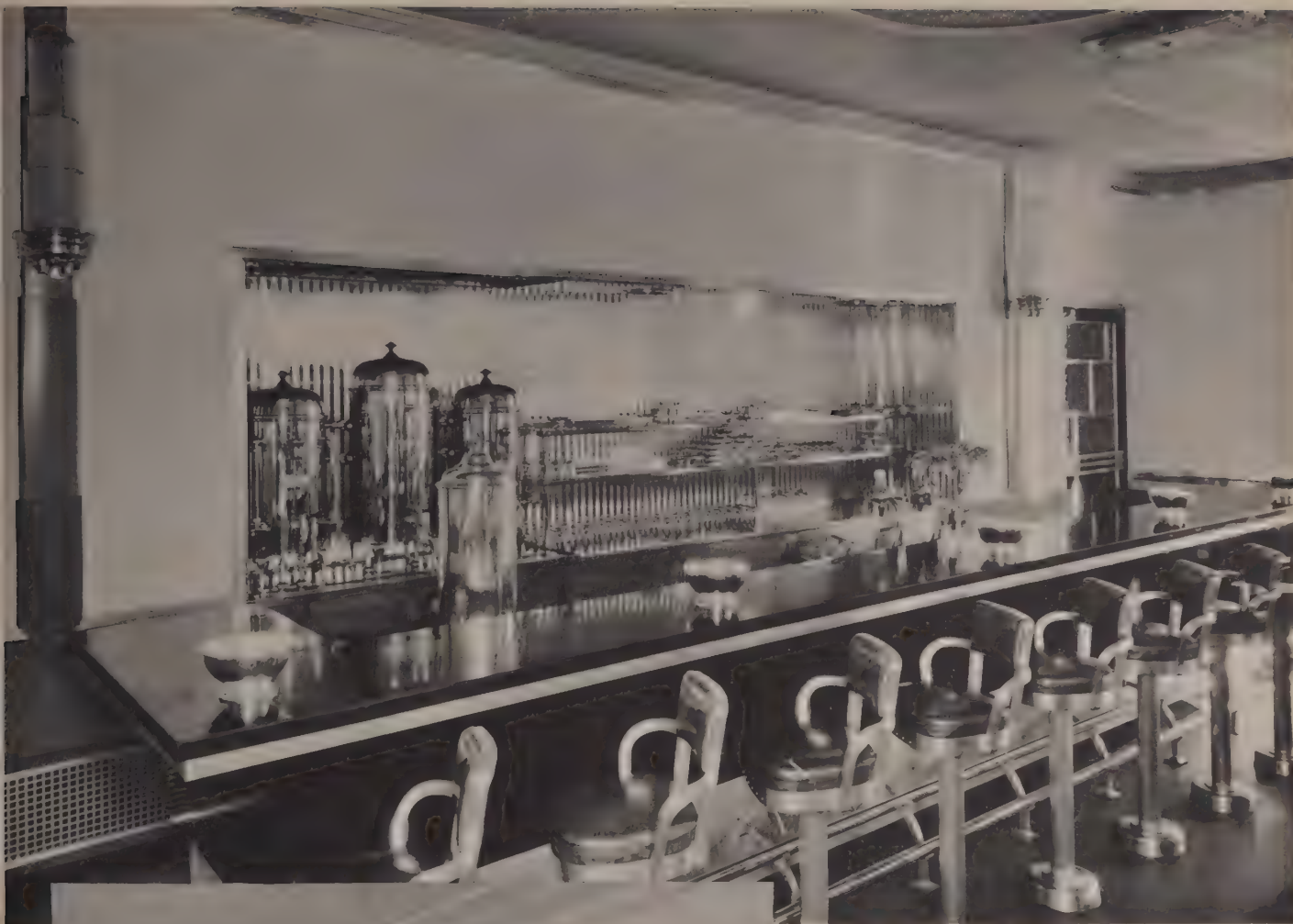
HALL & PROETZ
ARCHITECTS FOR
THE PUBLIC ROOMS

The Lacquer Room—a private dining-room. Two end walls and a dado are in yellow lacquer; the side walls covered with glazed chintz designed by Albert Herter. The carpet is gray bordered with black; the furniture upholstered in black horsehair





The Marine Dining-room. Walls, chalk white; columns, with carved wood marine motifs, in white lacquer; upper dado, cobalt blue; balustrade in gray lacquer; windows in cherry lacquer. Lower floor is stained pink; the ceiling covered with gold foil



The Coffee Bar. There is a linoleum floor, dado, and ceiling in nine gradations of gray; flat wall surfaces, butter yellow; trim, fixtures, furniture, etc., aluminum. Upholstery is in metallic blue leather; bar in black rubber; the mirror doors, gray



A typical elevator lobby. Walls are white; trim, marbled Prussian blue-green; console and chairs in white, black, and gold, the chairs having seats of black patent-leather



The Empire Room. Walls and ceiling are white; pilasters of Pyrenees black-and-white marble with cast pewter capitals; the chimney piece, white with Grand Antique marble; chandeliers are pewter and crystal; the carpet, peach color; the furniture in ebony and curly maple upholstered in cloth-of-gold

Some Pitfalls in Supervision

By W. F. Bartels

XXXI. MECHANICAL

APPURTENANCES

(CONTINUED)

Of course, closed tanks should be tested in the presence of the superintendent for an overpressure of at least 50 per cent more than their service maximum. The hot-water tank is usually of this type and is generally fed from the house tank by gravity. The material of which the tank is made should comply with that which has been specified, both as to thickness and quality of the material. Riveting should be so done that there is but little leakage and so that an excessive amount of calking is unnecessary. The superintendent should see that all the reinforcing around the connections called for has been provided. Ascertaining that the outlets are in their proper location is a wise precaution. After connections have been made, tests may be asked for, to determine the tightness of the tank. When this has been done and the tank emptied of water, the superintendent should see that it is thoroughly cleaned, dried and then coated with one of the better tank preservatives. If the tank has arrived on the job without a coat of red lead it should be cleaned and the exterior then painted, followed by another coat as soon as the first is dry. These coats of paint will of course not be put on while the tank contains water, because of the danger of sweating during the painting. Some architects have found that a coat of aluminum paint over the red lead is very satisfactory, but aluminum paint to be at its best should be freshly made from the powder. Before the tank is finally turned over to the owner the superintendent should see that it is emptied of all water and the sludge removed. Otherwise any stirring up of this sludge will not only cause muddy water but it may cause trouble by getting into some of the valves.

Domestic hot-water heaters are of many types. There are those which use an interior steam coil to heat the water in the tank, while others derive their heat from coils attached directly to the side of the boiler. But no matter what system is used, once selected by the architect or engineer, it is the superintendent's duty to see that all specifications in regard to it are faithfully complied with. I was once called back to a job where a side heater had been installed, the owner complaining that not enough heat

was forthcoming. Armed with the specification and the rating book of the heating manufacturer, I assured the owner that theoretically enough hot water *should* be coming from the

heater. But the fact remained that it was not. Digging into the covering on the heater, it was found that the number on the heater corresponded correctly to the one specified. But further investigation under the insulation disclosed the fact that the heater was joined to the boiler both top and bottom by a 1-inch pipe, while the outlet of the heater was made for a 2½-inch connection! The boiler had been delivered to the job tapped for a 1-inch outlet. Finding it thus, rather than laboriously drilling a 2½-inch hole, the mechanic had bushed the heater outlet down to one inch and covered it before any one saw it.

In the small house as well as in the large one, the superintendent should remember that all heat supplied to an indirect heater for hot water is taken away from the boiler. Unless a boiler is of sufficient size to take care of both the hot water and the steam, considerable dissatisfaction may result. It is evident that the size of both the boiler and the hot-water heater must be checked back against the specifications and the manufacturer's catalogue to see that the proper size has been delivered to the job. Then too, all such other equipment as thermometers, gauges, the rheostats, etc., must be gone over to see that they have been delivered to the job. Proper valves to cut off the storage tank from the heater, and the heater from the water supply, should be furnished. These may also provide for cleaning or removing coils without shutting down the main boiler, or for cutting off the flow through a heater not in use, such as might be required when a small heater is used for hot water in the summer and indirect heating from a large boiler in the winter. There is no use in allowing a flow of hot water to warm the water in the large boiler during the summer, which is what will happen unless there is a valve to shut this circulation off. A valve installed at a point to prevent this will save many B.t.u.'s. It may often seem that too many valves, capped tee outlets, etc., are being demanded, but the convenience they afford and the time and money

that they save when repairs are made, will more than compensate for the cost of their installation.

It is quite obvious that adequate covering of boilers and pipes is essential in conserving heat. When a boiler is properly insulated the room is not only more comfortable for the persons who must be there, but also more comforting on the check book of the man who foots the fuel bill. Many superintendents are prone to pass hurriedly over insulating work, feeling that it is only "fancy work." But if they were apprised of the astonishing amount of heat saved by good insulation, they would never need to be retold to insist on a first-class job. On tanks and boiler work, blocks of magnesia should be wired on, with a wire mesh fastened on top of them to provide the finish coat with a ground to which it can securely adhere. Another material may be obtained which has metal lath already fastened to it.

Many contrivances are used in connection with boilers besides hot-water heaters and the superintendent must be constantly on guard to prevent any palming off of an inferior article upon an owner unless the latter fully understands exactly what he is getting and what refund is to be given.

An illustration might be mentioned which, while covering one particular item, might be considered typical of many similar tests which might be asked for. An appliance which used the condensate of a steam system for heating the hot water of a building, also had a steam connection in case the condensate did not furnish enough heat to raise the water temperature to the proper degree. The appliance had been specified to perform certain functions, namely that a definite amount of condensate returning to this heater would raise a certain amount of water leaving the appliance a stipulated number of degrees. When the superintendent asked to have a test made he was told that it would be foolish, because all the needs for hot water were being supplied by the appliance and it had never once been necessary to cut in the live steam to help the condensate out. This answer, it will be seen at once, was irrelevant, unless other factors were known. The question might be asked, "Suppose there was an abnormal condensate over the period, and an underestimated amount of hot water used. The appliance might only be doing a quarter of the work it was supposed to and yet for a while might "get away with it." And again it will be seen that the superintendent must follow through in tests.

There is no dearth of pumps on the market today. However fortunate that may be, it is no wonder that the architect is often in a quandary as to which one to select. Each one seems to possess one or two specific and individual valuable features. And, according to their sponsors, the lack of this or that gadget on competitive makes automatically settles the choice.

The superintendent is apt to be in a dilemma when inspecting the pump and its installation. He is beset with such an array of conflicting considerations, and such sheafs of pamphlets with miscellaneous data, curves, graphs, peculiar terms, and highly specialized information, that he is to be excused for sometimes being in a mental fog as to how to proceed. But, be they vacuum, suction lift, pressure, force, or other types, these pumps are built to perform certain work according to specific requirements, if they are to operate successfully. The superintendent should make sure that everything within reason is done to co-operate with the concern supplying the pump so that there may be no argument later that the pump is failing to do its job because "such and such an item was not properly provided or attended to" for the pump contractor.

The proper location of pumps is an important item. While it seems perfectly obvious that they must be readily accessible from all sides, and the lighting more than adequate, nevertheless these are often not provided for on the architect's drawings. There must be ample room to get at the pump in case of repairs, when new parts must be substituted or swung into position. The pump should not require specially formed mechanics. In one building I recall that a pump was so located that it required not only a tall, thin man but one with a gorilla's arms to get at the oil cups. The oiler in charge possessed neither of these qualifications; unfortunately he had both short arms and a generous girth. One day the oiler ran to his chief with word that the pump bearings were "frozen." The oil cups were filled to the top and nobody could understand why the bearings could "freeze" with the cups full of oil—except possibly the oiler, who then realized that filling them after the bearings had "frozen" was of little value. Then too, the turns and run of pipe necessary to reach a central point must be considered. These add to the vibration and friction and should be avoided as far as possible.

(To be continued)

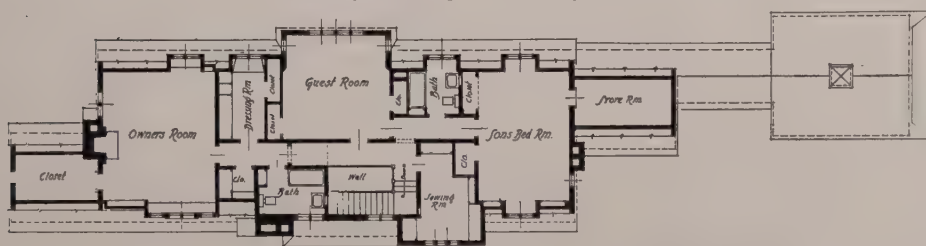


Photograph by Tyner & Murphy

House of Dr. Thomas G. Orr, Kansas City, Mo.

EDWARD BUEHLER DELK, ARCHITECT

This house received the 1930 medal of the Kansas City Chapter, A. I. A., in the residential class. The long plan is explained by the site, the house following the bank of a water course



• Second Floor Plan •



• First Floor Plan •



Photograph by Anderson

Detail of the main entrance



Photographs by Clara H. Sparks

The fireplace end of the living-room

HOUSE OF DR. THOMAS G. ORR,
KANSAS CITY, MO.
EDWARD BUEHLER DELK, ARCHITECT

*Looking into the hall from the
lower level of the living-room*





Photograph by Clara H. Sparks

Dining-room, largely of glass on the side toward the water

HOUSE OF DR. THOMAS G. ORR,
KANSAS CITY, MO.

EDWARD BUEHLER DELK, ARCHITECT

The stair hall

Photograph by Anderson



◀ ARCHITECTURE ▶

Friday, February 24.—Although the facts have been rather widely known for some time, I was rather jarred to realize that out of one hundred forty-five million dollars set aside by Congress for public-building construction this fiscal year, one fifth of it will be spent within the small area constituting the District of Columbia. The Federal projects under way in Washington are as follows:

| | |
|-----------------------------------------------------------------------------------|--------------|
| Extension building, Department of Agriculture..... | \$12,800,000 |
| Archives Building..... | 8,750,000 |
| Central heating plant..... | 5,749,000 |
| Labor Department and Interstate Commerce..... | 11,250,000 |
| Department of Justice Building..... | 12,000,000 |
| Postoffice Department..... | 10,300,000 |
| Public Health Service..... | 908,250 |
| Annex to city postoffice..... | 4,000,000 |
| Addition to Senate Office Building..... | 2,146,669 |
| House Office Building addition.. | 582,901 |
| Supreme Court Building..... | 8,381,980 |
| Addition to Congressional Library..... | 1,123,000 |
| Development of Botanical Gardens..... | 739,166 |
| Congressional garage and terrace development, including the subway fountains..... | 806,001 |
| Total..... | \$78,536,967 |

Saturday, February 25.—Varying from the usual custom of presenting its medals on the night of the formal opening, the League for this year's Show postponed the ceremonies until today. There was nothing particularly surprising to most of us in the details of the awards (page 211 of the April ARCHITECTURE). Joseph Urban was the big hero of the occasion in receiving two medals. One of these, the President's Medal, has not been awarded for some years, and it was a particularly popular gesture when it was given this year to the man who put together what, as a unit, is considered one of the most effective exhibitions in its manner of presentation that the League has ever staged

Tuesday, February 28.—The evidence continues to pile up in substantiation of the belief that a really large programme of public works offers the only way out of our economic slough. Even the bankers seem to be joining the ranks, for Martin Dodge, representing the Second Federal Reserve District, recently broadcast his whole-hearted support of such a view. One of the most interesting bits of his talk was:

"Several misconceptions prevail regarding the construction of public works as an aid in the present depression. For instance, it is said that no reasonable programme of public works could possibly supply jobs for the ten or twelve million persons now out of work, so why bother with it at all? No one contends, of course, that the government can supply jobs to ten or twelve million persons. It is equally true, however,



The Editor's Diary

that the government cannot permanently provide food, clothing, and shelter for these ten or twelve million persons and their dependents. The only genuine relief for the unemployed is re-employment by business and industry. Every plan of relief, therefore, should be tested on the basis of whether or not it contributes to economic recovery.

... "A third misconception is the belief that 'public works' means public works by the national government. The truth of the matter is that the bulk of public works construction has almost always been local or State, rather than national. Such projects as municipal water works, sewer systems, street and highway construction, bridges, tunnels, schools, and county and municipal buildings, constitute by far the largest percentage of all public works construction.

... "Can we afford it? Is it not inconsistent with present efforts toward tax reduction, economy, and retrenchment? These questions reflect a fourth misconception regarding public works as a means for stimulating business recovery. The answer here is that if we do not spend money in such a way as to provide employment we shall have to spend it for unemployment; that if economy means blind retrenchment it becomes extravagance; for instance, a wholesale suspension of public works, ostensibly to cut expenses, simply means transferring men from the employment roll to the relief roll, which costs money just the same but adds nothing to the public wealth and makes no contribution to business recovery."

Wednesday, March 1.—James T. Grady, publicist for the A. I. A., joined the architectural editors at luncheon today, and told us something of the present status of the Institute's efforts toward new Federal legislation. With the change of administration and the strong possibility of a complete reorganization of the government bureaus, it would seem best to sit tight for the moment and await the new course in which the ship of state will be set.

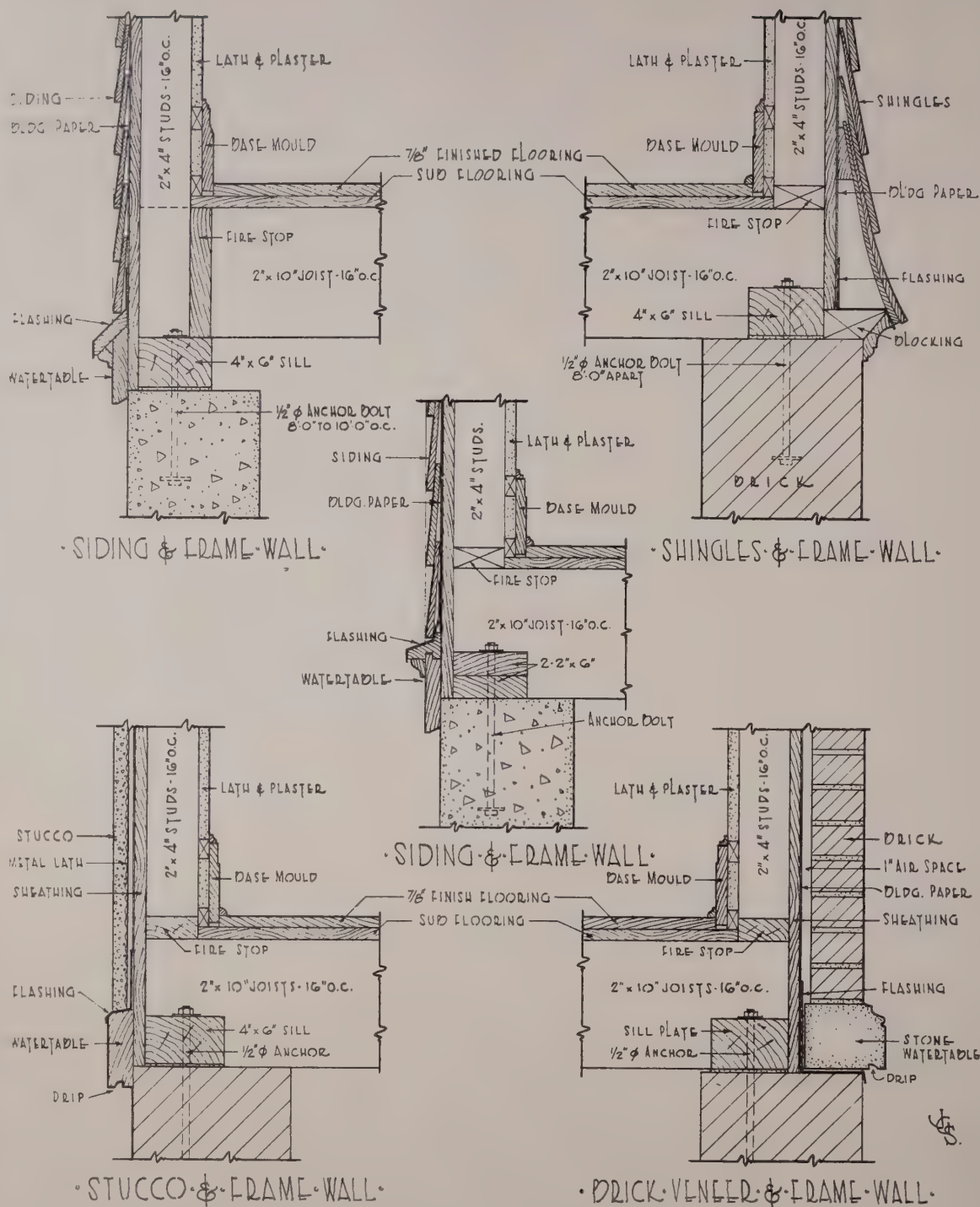
Thursday, March 2.—Lunched with Milton Lowenstein, discussing possibilities in architectural education. It is interesting to speculate on what results

would follow an architectural educational movement based on materials rather than on style. If the student were grounded upon the fundamentals of construction in all the varieties it has achieved throughout the ages, rather than grounded upon what various men did with these materials in the evolution of style, the education of an architect would seem to reach a more logical and rational development. If, instead of studying the history of style, a student were thoroughly grounded (including training in the actual handling of stone, timber, plaster, steel, etc.) in the way, for instance, the French use stone; the Scandinavian countries, timber; Holland, brickwork; and the United States, the steel skeleton, would not the chances for creative achievement be brighter? The Bauhaus, of course, has been attempting this, but it is still early to weigh the results.

Friday, March 3.—William Lawrence Bottomley heads a committee of the New York Chapter, A. I. A., and the Architectural League of New York, for the purpose of publishing a survey of great Georgian mansions in the United States, all built prior to 1830. The project, like so many other architectural activities these days, is designed to make work for some of the unemployed draftsmen. Among the houses to be included are the Gardner Ladd house, Portsmouth, N. H.; the Van Rensselaer house, Albany; Hyde Hall, Cooperstown, N. Y.; Mount Pleasant, Philadelphia; White Hall, Md.; Mount Vernon and Mount Airy in Virginia; and Drayton Hall on the Ashley River, S. C., some of which mansions are almost unknown to the profession.

Saturday, March 4.—Speaking of educational matters, there has just been formed a Joint Advisory Committee composed of representatives from the four leading architectural organizations, with the purpose of guiding young architects toward uniform professional preparation for the practice. The Joint Committee is headed by Charles C. Zant-zinger, F. A. I. A., and includes Charles Butler, F. A. I. A.; Emery Stanford Hall and James M. White of the National Council of Architectural Registration Boards; William Emerson and Roy Childs Jones of the Association of Collegiate Schools of Architecture; Ely Jacques Kahn of the Beaux-Arts Institute of Design. The committee outlined a programme calling for a minimum of eleven years of study.

The chief fault found with the present method deals with the period between graduation from college and entrance upon individual practice. One great difficulty here is the lack of opportunity afforded most draftsmen to see the actual work in progress. Possibly a part-time arrangement might be put into



VARIOUS RESIDENTIAL WATERTABLES
A SERIES OF WORKING DRAWINGS BY JACK G. STEWART

SCALE: 0 3" 6" 9" 1'-0"

PLATE NO 36

effect by which the draftsman is paid for his hours in the office and allowed to visit construction work on the job and in the factory with greater freedom.

The eleven years' minimum training consists of four years of school or academy; four years of technical college work; three years of internship or directed practical experiment under an experienced preceptor. Practically all are agreed also that the four years of technical college work should be supplemented by two years of liberal arts or foreign travel, or both.

Monday, March 6.—New York is going about its business almost as usual this morning with the banks closed. Apparently the hoarding of currency is not the only sin of which we may be accused at the moment. The New York Public Library has been subjected to a run. More than thirteen million books were withdrawn in 1932—an increase of nearly 25 per cent since 1929. The run has attained such force that a 33⅓ per cent limit is placed upon withdrawals. Hereafter the tellers will pass out only two books at a time instead of the six formerly allowed.

Wednesday, March 8.—This lull in architectural activities gives us a splendid opportunity to put our house in order, particularly in one or two such unsatisfactory matters as bid-peddling. The plan formulated by Professor Eric T. Huddleston, of the University of New Hampshire, is more and more widely and favorably discussed. It provides that a general contractor's bid shall be in two parts—the first quoting a sum total for his own work and profits; the second containing a list of sub-contractors' bids, which the general contractor submits as making up the remainder of his total contract price. These sub-contractors' bids are sent to the architect

shortly in advance of the opening of general bids. The general contractor, therefore, is selected on the basis of his own work and profits, and the sub-contractors are selected at their stated price from the entire list of those submitting bids, provided only that those chosen must have the approval of the general contractor with whom they are to work.

Thursday, March 9.—The Pittsburgh Chapter, A. I. A., has launched a well-mapped-out campaign to make an architectural survey of twenty-seven counties in Western Pennsylvania. The purpose is to locate buildings erected in this section before 1860 in so far as these buildings are important architecturally and historically, and to compile photographs, drawings, and information to be preserved in the collection of the Historical Society of Western Pennsylvania. Rody Patterson is Executive Secretary of the Survey, 1707 Koppers Building, Pittsburgh.

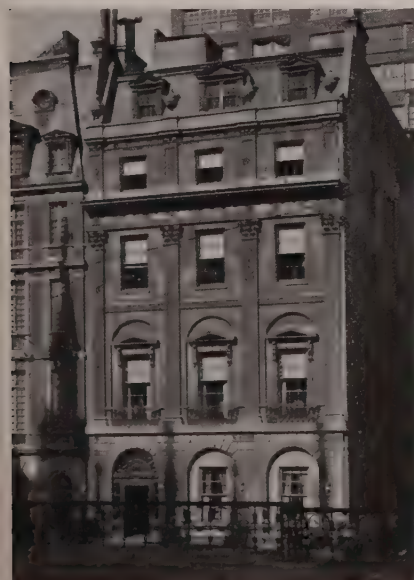
Friday, March 10.—Charles H. Higgins, president of the New York Chapter, A. I. A., was telling me the other day that Stanford White built a house for F. Knight Sturgis on East 51st Street, which, in the façade, very closely resembles a house that Robert Adam built for Sir Watkin Williams-Wynn at 20 St. James's Square, London. Sir Watkin's family happens to be in Higgins's direct line of descent. I went to see the Sturgis house today, and, through the courtesy of E. Harold L. Thompson of the Rosenbach Company, went through it from cellar to roof. The house was designed in all the dignity of the Brothers Adam style, though it seemed to me with a bit less restraint in some of the details than we would venture today. The plan varies considerably from the one in St. James's Square, in accordance with differing modes of living, but in the ceiling of the drawing-room on the third floor Stanford White used a true copy of one of the London house ceilings, excepting for its segmental ends. The elaborate wrought-iron stair railing in the New York house at first glance seems to duplicate the Adam original, but it turns out to be quite different in detail. The London house, too, I understand, is used by a dealer in antique furniture, and it may well be imagined that the stately rooms make an ideal background for eighteenth-century English furniture, silverware, and the like. Incidentally, the London house is rather well illustrated in Bolton's "The Architecture of Robert and James Adam."

Sunday, March 12.—I was interested to see that V. Gilmore Iden, di-

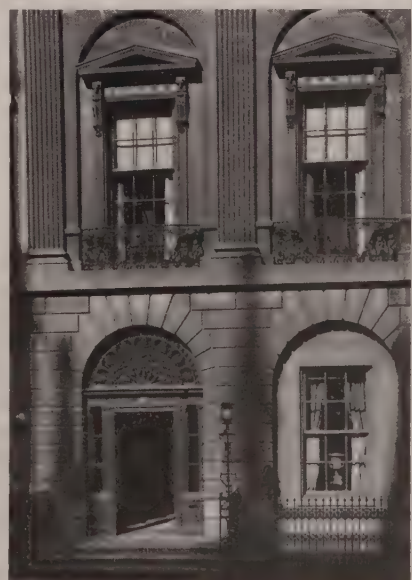
rector of public relations for the American Institute of Steel Construction, admits that efforts to build houses entirely of steel are unfortunate. This is setting a good example. In a speech before New Jersey masonry material dealers in January, Mr. Iden quoted Fred T. Llewellyn, consulting engineer of the United States Steel Corporation: "I conclude that the proper design of steel work in residences depends largely on materials other than steel. It depends upon the assistance of the enveloping materials." There has been entirely too much effort on the part of various industries to prove that one material alone is the best material with which to build our houses. More and more we are coming to see that the logical and economical solution will lie in an intricate combination of a number of materials.

Monday, March 13.—Alfred Githens, Thomas Ellett, and I discovered a rather interesting book in a club library today—a book that for some reason has apparently failed to achieve notice in any of the professional journals, so far as I know, possibly because it is in German. Its title is "Die Baukunst der Neuesten Zeit," an independent unit in an elaborate series of volumes under the general title of "Propylaen Kunstgeschichte." The series constitutes an encyclopædia of art, profusely illustrated. The volume that interested us most, however, is an attempt by Gustav Adolf Platz to summarize modern architecture in the twentieth century, tracing the growth of the so-called modern architecture from its rather innocent beginnings to the extremes of pseudo-functionalism.

Tuesday, March 14.—William G. Tachau and I listened to Frank Lloyd Wright speak before a large luncheon gathering, laying the bulk of the blame



The house at 17 East 51st Street, New York, designed by McKim, Mead & White for F. Knight Sturgis, adapting Robert Adam's house for Sir Watkin Williams-Wynn at 20 St. James's Square, London



for the architecture of the twentieth century at the door of our education, which he says is from the top down in eclecticism.

Thursday, March 16.—Reading Moholy-Nagy's "The New Vision," I have run across the following explanation of distortion in art. I quoted Chester H. Rowell in these pages recently as saying that a fundamental principle of painting these days seems to be that "if one can draw, he mustn't." Moholy-Nagy, who has been lecturing on art at the Bauhaus, explains why. "In our environment there are stereometrically exact objects: flasks, goblets, musical instruments, etc. But since they are all around us, nobody any longer experiences their beauty. So we must make the beauty of the exact clear by an artificial distortion leading to a conscious rectification (in the mind of the observer)."

So now you know.

Moholy-Nagy's explanation of sculpture and its development through the various phases of kinetics, volume secured through motion, and light as spatial projection, leads us still further into the maze of modern thought.

Saturday, March 18.—The National Archives Building now under construction in Washington is, from all accounts, a most unusual problem. The Office of John Russell Pope is designing it, with Clyde R. Place as consulting engineer on mechanical equipment. The building is to be five stories high, but will contain twenty-one tiers of stacks in which the documents and papers will be stored. The basement is to contain cleaning, repairing, and bindery spaces, photographic rooms, storage and mechanical equipment. The new science of air-conditioning here comes into play as a further safeguard against deterioration of the documents. There is to be about four million cubic feet of air-conditioned space. The cooling alone of this large volume of air requires refrigeration equivalent to the melting of one thousand tons of ice every twenty-four hours.

Monday, March 20.—Lunched with Lorimer Rich, discussing, for the most part, our national tendency to haste. Louisiana, I believe, is boasting of having built its State House in twelve months. Stockholm, on the other hand, built its Town Hall, and Ragnar Ostberg took fifteen years to do it. Building a State House in twelve months is a risky business at best. When one looks back over the buildings that satisfy us over long periods, one is apt to find that considerable time was expended in their making. The Boston Public Library was in the office of McKim, Mead & White for ten or twelve years. Henry Bacon spent almost ten years on the Lincoln Memorial. Nebraska is building a State House, too, but, instead of doing it in twelve months, has been at it for

some twelve years, and the end is not yet. There seems to be considerable evidence, however, to the effect that when it is finished it will be worthy of the time spent upon it.

Tuesday, March 21.—Spent the evening with Kenneth Murchison, William F. Lamb, and two engineers—Leon S. Moisseiff and Edward A. Byrne—as a jury passing on the first stage of the American Institute of Steel Construction's Annual Students' Bridge Design Competition. There were one hundred thirty-four entries from architectural and engineering schools throughout the United States and Canada; from which we selected ten as worthy of further development by their authors in the final stage of the competition. I was interested to find that even in a subject connected so closely with engineering rather than architecture, the matter of scale proved to be a determining factor in the judgment. Too many students would throw across a gorge span of 250 feet a bridge structure that might have spanned Hell Gate or the Susquehanna River at its widest point. Then too, there seemed to be a great tendency—probably on the part of the architectural competitors chiefly—to display their knowledge of every engineering device ever utilized in bridge design, rather than to make a choice of the most suitable one for this particular problem.

Wednesday, March 22.—There is an exhibit of the New York Chapter's Apartment House awards covering the years 1910 to the present time, hanging in the main exhibition room at The League. It is an instructive picture of the road we have travelled in nearly a quarter of a century—from the heavy overhanging cornices and applied ornamentation to the sleek, businesslike apartments of recent years, such as Andrew Thomas's Dunbar Apartments, Clarence Stein's Phipps, and others. It is not altogether reassuring, architecturally, to find how illogical and comparatively futile our designs must have been, made twenty years ago, when one considers that these examples exhibited are the prize awards.



Friday, March 24.—William Sloane Coffin, one of whose jobs is the presidency of the Metropolitan Museum of Art, is somewhat concerned over the fact that nearly sixty thousand fewer persons visited the Museum during 1932 than in the previous year—the attendance falling from 1,334,317 to 1,274,672. It might be expected that in a period like the present, more people would have opportunity and leisure to visit the Museum. Mr. Coffin believes, however,

that appreciation and enjoyment of art by the adult, as something to fall back upon in times of stress, seldom comes unless early education has provided a background. However, while the total number of visitors fell off, the number of persons coming to lectures, classes, and other museum work increased nearly twenty per cent. The attendance at public concerts given through the generosity of Mr. Edward Harkness, and a grant by the Juilliard Foundation, increased, which perhaps may be explained by the fact that more people find it easier to enjoy music than to enjoy painting or sculpture.

Sunday, March 25.—Gordon Simpson in from the Pacific Coast with word that building activities are rather more marked out there than in the East, due partly to the earthquake. The Pacific Coast more and more seems to be growing to be a little world of its own, rather more self-contained, I imagine, than the East. Here our dependence upon the activities among other peoples abroad and the intricacies of international relationships are unquestionably growing more acute. The Pacific Coast, on the other hand, seems to worry along fairly well under its own power.

Tuesday, March 28.—Douglas Haskell in with some news of Henry Wright's findings abroad. Wright, in studying modern housing in England and on the Continent, finds a great deal of confirmation for some of the latest conclusions his study has brought out in connection with American housing. Wright is always about two jumps ahead of the prevailing accepted thought regarding housing, and he has just taken another stride. One of the handicaps in our housing has been the tacit assumption that a housing group should be a repetition of one or two sizes of unit. This is not in accordance with our needs, nor Wright's feeling that the family units in any community are very diverse and that their housing should correspond. It is too common practice for young people in a family, for example, when they marry, to have to move to a distant community for accommodations on a smaller scale, thereby straining all ties of family and friends. Through ingenious planning, Wright has arrived at a scheme by which a housing group can provide variety of space on the flat or on two floors, each unit with its individual entrance without the necessity for janitor service, elevators, or other expensive accompaniments of community life. The development of individual heating, hot-water supply, refrigeration, and incineration is likely to bring a new and more workable type of community housing which, for the first time, is adapted to man's needs rather than forcing man with his diverse needs into a Procrustes bed.

THE SEVENTY-NINTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF THE EAGLE IN SCULPTURE

*Subjects of previous portfolios are listed below
at left and right of page*



❖ 1926
DORMER WINDOWS
SHUTTERS AND BLINDS

❖ 1927
ENGLISH PANELLING
GEORGIAN STAIRWAYS
STONE MASONRY TEXTURES
ENGLISH CHIMNEYS
FANLIGHTS AND OVERDOORS
TEXTURES OF BRICKWORK
IRON RAILINGS
DOOR HARDWARE
PALLADIAN MOTIVES
GABLE ENDS
COLONIAL TOP-RAILINGS
CIRCULAR AND OVAL WINDOWS

❖ 1928
BUILT-IN BOOKCASES
CHIMNEY TOPS
DOOR HOODS
BAY WINDOWS
CUPOLAS
GARDEN GATES
STAIR ENDS
BALCONIES
GARDEN WALLS
ARCADES
PLASTER CEILINGS
CORNICES OF WOOD

❖ 1929
DOORWAY LIGHTING
ENGLISH FIREPLACES
GATE-POST TOPS
GARDEN STEPS
RAIN LEADER HEADS
GARDEN POOLS
QUOINS
INTERIOR PAVING
BELT COURSES
KEYSTONES
AIDS TO FENESTRATION
BALUSTRADES

*Below are the subjects of
forthcoming Portfolios*

Eaves Returns on
Masonry Gables

JUNE

Exterior Lettering

JULY

Entrance Driveways

AUGUST

Corbels

SEPTEMBER

Pew Ends

OCTOBER

Gothic Niches

NOVEMBER

*Photographs showing interesting
examples under any of these head-
ings will be welcomed by the Edi-
tor, though it should be noted that
these respective issues are made up
about six weeks in advance of
publication date.*

1930 ❖
SPANDRELS
CHANCEL FURNITURE
BUSINESS BUILDING ENTRANCES
GARDEN SHELTERS
ELEVATOR DOORS
ENTRANCE PORCHES
PATIOS
TREILLAGE
FLAGPOLE HOLDERS
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

1931 ❖
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS
ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

1932 ❖
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONEWORK
OVER-MANTEL TREATMENTS

1933 ❖
BANK SCREENS
INTERIOR DOORS
METAL STAIR RAILINGS
VERANDAS



Masonic Temple Building, Ansonia, Conn.
Douglas Orr

Aluminum, Federal Reserve Bank, Pittsburgh
Henry Hering



For Farmington School, Farmington, Conn.
Lee Lawrie

Cast lead, Fort Jay, Governor's Island, N. Y.
Enea Biafora





For Pasadena Memorial Flagstaff
Lee Lawrie



First National Bank, Azusa, Calif.
Robert Orr

Pylon, Philadelphia Civil War Memorial
Hermon A. MacNeil

Nebraska State Capitol, Lincoln
Lee Lawrie
Bertram G. Goodhue Associates





*National City Bank Branch, New York City
Walker & Gillette*



*International Mercantile Marine Building, New York City
Walter B. Chambers*

*For wood carving
Hazel Clere*



*Whitinsville (Mass.) Monument
Hermon A. MacNeil*

*University of Chicago Chapel
Ulric H. Ellerhusen
Bertram G. Goodhue Associates*

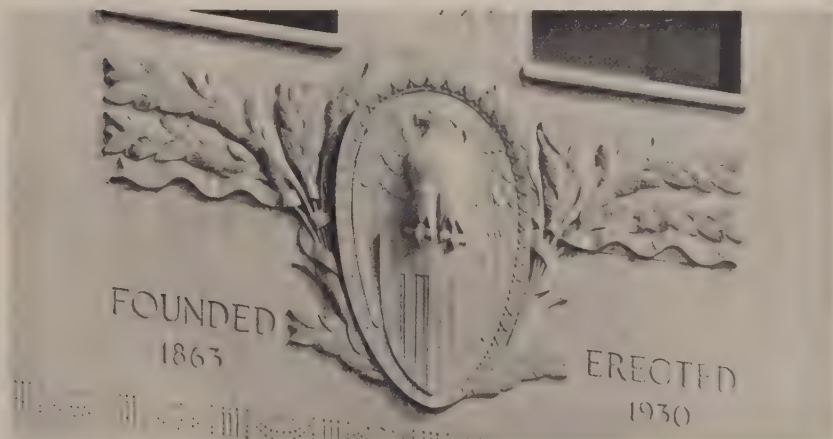




*Polished aluminum,
Hartford (Conn.) Post Office
Malmfeldt, Adams & Prentice*

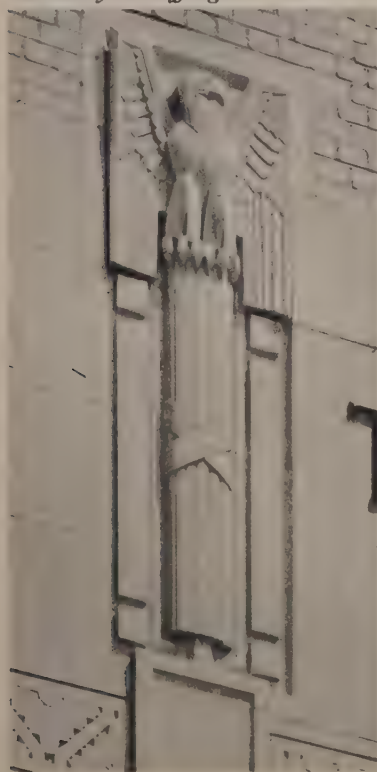


*Federal Reserve Bank, Minneapolis
Cass Gilbert*



*First National Bank, Hamilton, O.
Childs & Smith*

*Bloomfield (N. J.) Bank
Mowbray & Uffinger*

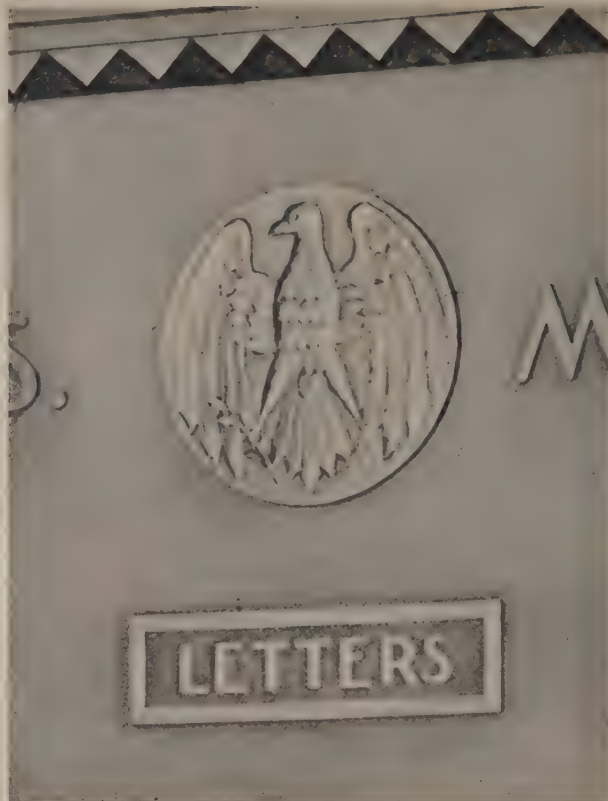


*Wall fountain, Fleischman Estate, Cincinnati, O.
Edmond Amateis
A. D. Taylor*





*Bricken Textile Building, New York City
The Firm of Ely Jacques Kahn*



*Office of Brown Brothers & Company, New York City
Delano & Aldrich*

*National Newark (N. J.) Building
John H. and Wilson C. Ely*

*Chrysler Building, New York City
William Van Alen*





*Squibb Building, New York City
The Firm of Ely Jacques Kahn*

*19 Rector Street, New York City
Lafayette A. Goldstone*



*Pershing Square Building, New York City
York & Sawyer*



*Bauer Building, Los Angeles
John and Donald Parkinson*



Thomas Redfield Proctor Memorial, Utica, N. Y.
Charles Keck

"Son of the Eagle"
A. Stirling Calder



*Pennsylvania Railroad Terminal,
New York City*
Adolph A. Weinman
McKim, Mead
& White



A. I. A. Gold Medal
Adolph A. Weinman

*District
of Columbia
War Memorial*
Frederick H. Brooke





*Pottstown (Pa.)
War Memorial
Adolph A. Weinman*



*United States Soldier's Medal
Gaetano Cecere*

*Dominion
Bank,
Toronto
John M. Lyle*



*Ridgewood (N. J.) War Memorial
Henry Hering Henry Bacon
Guild Hall, East Hampton, L. I.
Aymar Embury II*





*Federal Reserve Bank, Cleveland, O.
Henry Hering
Walker & Weeks*



*West Virginia State Capitol, Charleston
Cass Gilbert*

*Pennsylvania Railroad Terminal, New York City
Adolph A. Weinman
McKim, Mead & White*



*Maricopa County Court House,
Phoenix, Ariz.
Edward F. Neild*

*New Britain (Conn.)
War Memorial
H. Van Buren Magonigle*





*Aluminum,
Clarksburg (West Va.) Bank
Henry Hering
Walker & Weeks*

*American Bank
& Trust Company,
New Orleans
Moise H. Goldstein*



*Union Center (N. Y.) National Bank
Frederick A. Elsasser*



Bank of the United States Branch, New York City

*Cornell Law School
Lee Lawrie
Jackson, Robertson & Adams*





United States Embassy, Paris
C. Paul Jennewein
Delano & Aldrich



Scottish Rite Temple, Washington, D. C.
Adolph A. Weinman
Office of John Russell Pope



Plaza Trust Company,
New York City

Corbett, Harrison
& McMurray

First National Bank,
Mamaroneck, N. Y.
Office of John Russell Pope

Los Angeles Library
Lee Lawrie
Bertram G. Goodhue
Carleton M. Winslow





Louisiana State Capitol, Baton Rouge
Lee Lawrie
Weiss, Dreyfous & Seiferth, Inc



*Bankers Trust Building,
New York City*
John De Cesare
Shreve, Lamb & Harmon



*Federal Reserve Bank,
Chicago*

*Henry Hering
Graham, Anderson,
Probst & White*

Cadet Barracks, West Point
Lee Lawrie
Cram, Goodhue & Ferguson

*Approach,
Tomb of the Unknown Soldier,
Arlington, Va.*
Thomas Hudson Jones
Lorimer Rich





*Church of the Transfiguration of our Lord,
Philadelphia*

Henry D. Dagitt & Sons

*Pylon top, Harrisburg (Pa.) Memorial Bridge
Lee Lawrie*



Baltimore World War Memorial

Edmond Amateis

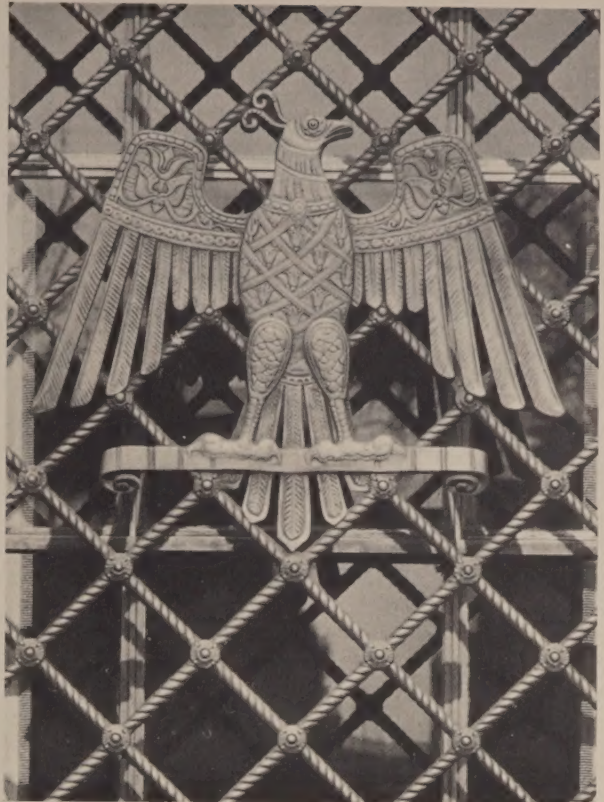
Laurence Hall Fowler

*Portland (Ore.) Post Office
Lewis P. Hobart*





*For flagpole top, West Virginia State Capitol,
Charleston*
Cass Gilbert



East New York Savings Bank, Brooklyn
Holmes & Winslow

Portland (Ore.) Post Office
Lewis P. Hobart

National City Company Building, New York City
McKim, Mead & White



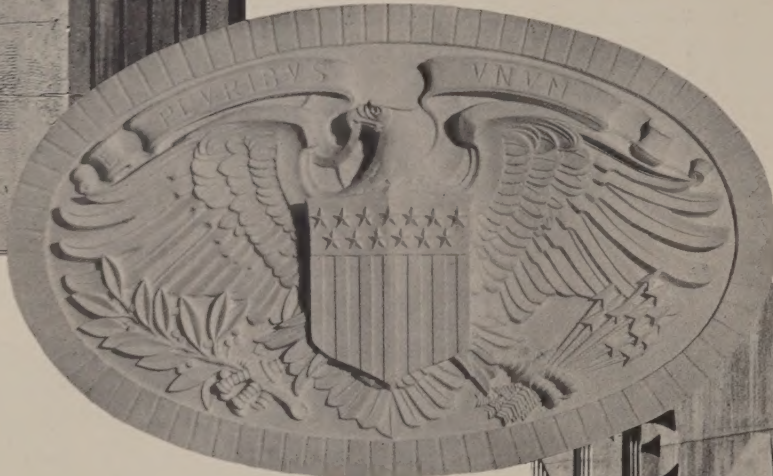


*Louisiana
State Capitol,
Baton Rouge
Lee Lawrie
Weiss, Dreyfous
& Seiferth, Inc.*



*National City Bank Branch, New York City
Ulric H. Ellerhusen*

Below, Glen Cove (N. Y.) Post Office



*Empire State
Building,
New York City
John De Cesare
Shreve, Lamb
& Harmon*

*Hazel Clere
Supervising Architect of the Treasury;
Delano & Aldrich*

*Bank of Nova Scotia, Halifax
John M. Lyle*







WIVINGTON, NORFOLK

By courtesy of Kennedy & Company

INLAND ISLANDS. Soft-ground etching by Gerald K. Geerlings

Size of original, 6 $\frac{3}{8}$ by 11 $\frac{1}{4}$ inches. See article on page 333

◀ ARCHITECTURE ▶